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Solid Waste Site Survey and Report

Gulf Coast Waste Disposal Authority, Houston, Tex

Aug 76

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SOLID WASTE
SITE SURVEY & REPORT

AUGUST 1976

HGAC HOUSTON-GALVESTON AREA COUNCIL

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SOLID WASTE SITE SURVEY AND REPORT

AREAWIDE WASTE TREATMENT MANAGEMENT PLAN
FOR THE
GREATER HOUSTON AREA
(SECTION 208, PL 92-500)

AUGUST, 1976

PREPARED FOR THE HOUSTON-GALVESTON AREA COUNCIL
BY THE GULF COAST WASTE DISPOSAL AUTHORITY

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Was Financed Through a
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U.S. Environmental Protection Agency

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PART I - INTRODUCTION

A. PURPOSE

The purpose of this report is to provide a listing of the existing industrial, commercial, and municipal placement sites and to depict the types of sites, approximate quantities of waste material deposited at each site, site capacity, site life expectancy, and site potential for surface water quality degradation. Closed sites were not investigated, although their potential for surface water contamination may still exist. Also, the potential effects on groundwater were not included as a part of this study.

B. SCOPE

This report contains the following information: (1) background information; (2) report methodology; (3) summary of solid waste placement sites; (4) a tabulation of solid waste sites by type, site capacity, projected site life, leachate handling facilities and probable affected water courses; (5) an appendix of industrial, commercial, and municipal survey forms including photographs (where appropriate) and location maps; and (6) a large (1 inch equals 1 mile) solid waste placement site location map.

C. BACKGROUND INFORMATION

Each of the solid waste placement sites in the Houston 208 Study Area has a potential to produce a discharge called leachate. Leachate is a combination of water and any dissolved or suspended materials that move through a landfill by means of water transport. The mechanism of water transport occurs when the solid waste has a moisture content greater than the amount of moisture the solid waste can hold indefinitely (field capacity). In most cases water must enter the disposal site from an outside source in order for leachate to be generated. The three principal outside sources of water are:

1. Percolation of surface water through the top layer of cover material.
2. Horizontal groundwater movement into the side of a disposal area.
3. Capillary action of the material or a rise in the groundwater table, causing water to enter the disposal area from the bottom.

The quantity of leachate produced is, of course, dependent on the amount of outside water moving through a particular disposal site. The amount and quality of water moving through a disposal site also can influence the quality of the leachate produced. The composition of the leachate depends on several factors:

1. The composition of the material in the disposal site.
2. The physical, biological, and chemical conditions and activities unique to each disposal site.
3. The characteristics of the incoming water.
4. The soil characteristics of area surrounding the disposal site.
5. The age of the disposal site.

These factors indicate that there can be a great variation in the composition of leachate and the length of time production occurs. Also, depending on the influence of these factors, the leachate could become a pollutant to nearby watercourses or groundwater supplies. The amount and quality of leachate reaching watercourses depends largely on the soil characteristics of the disposal site.

The natural purification process of soil and dilution effects tends to minimize surface water or groundwater pollution from disposal sites that are properly maintained. There are several purification mechanisms that are active as leachate moves through a fill site and through the soil surrounding and below a fill site. These mechanisms include filtration, adsorption, dilution, dispersion, ion exchange, precipitation, and complexing as well as biological degradation.[1, 2] Those mechanisms that predominate are determined by the soil particle size and shape, the actual soil and leachate composition, and the saturated or unsaturated condition of the soil.[3]

The Texas State Department of Health Resources Municipal Solid Waste Regulations and the Texas Water Quality Board Industrial Solid Waste Regulations both require that disposal sites be surrounded by soil that is essentially impermeable (coefficient of permeability no greater than 10^{-7} cm/sec.). If these regulations are followed, there is very little chance that contamination of surface water or groundwater will result from the operation of a permitted disposal site.

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[1] D. R. Brunner and D. J. Keller, Sanitary Landfill Design and Operation, Sw-65ts (EPA, 1972), p. 4.

[2] K. Cartwright and F. B. Sherman, Evaluating Sanitary Landfill Sites in Illinois, Environmental Geology Notes, No. 27 (Illinois State Geological Survey, 1969), p. 315.

[3] G. M. Hughes, R.A. Landon, and R.N. Farvolden, Hydrogeology of Solid Waste Disposal Sites in Northeastern Illinois, (EPA, 1971), p. 4-5.

This survey was performed without sufficient funding to provide for monitoring wells at each site or sampling of nearby watercourses. Instead, visual observations were made to determine if a potential for leachate movement out of a disposal site existed. Several of the site conditions that were considered when on-site visits were made included: soil type of cover material, type of material being disposed, site operation methods (i.e., how often is cover required), any evidence of past leachate movement out of the fill area, slope of the disposal area, and proximity to nearby watercourses. Consideration of these items aided the surveyors in the visual determination of a site's potential for contributing to water pollution.

PART II - REPORT METHODOLOGY

A. INVENTORY PROCEDURE

The Gulf Coast Waste Disposal Authority survey involved the review of questionnaire forms supplied by the Texas Water Quality Board (Figure A) and existing industrial, commercial and municipal disposal site data from the Thirteen County Sewer Plan, City of Houston Industrial Waste Reports, Texas State Department of Health Resources, TWQB and local reports, Analysis of Activity 5 - Sludge Inventory, surveys and on-site investigations for pertinent information. A listing of the placement sites on GCWDA survey forms (Figure B) was also prepared for later documentation by on-site GCWDA verification and analysis.

B. MAPPING PROCEDURE

The procedure followed in mapping the location of the municipal, commercial, industrial and hazardous solid waste placement sites involved the use of a "Houston and Harris County Atlas" (Key Maps, Inc., 1974) and on-site verifications to accurately determine where the sites were in relation to each other and to affected water courses. Following site location through the preceding manner, each placement site was marked and pinpointed upon a blueline map furnished by H-GAC (scale of one inch equals one mile).

C. SITE VERIFICATION PROCEDURE

To accomplish the verification, members of the planning staff of GCWDA visited each significant site, two staff members to each survey team, and contacted the site manager. After proper identification was established, site managers were informed as to the purpose of the survey and the actions necessary to the gathering of the essential data. Cooperation of the site managers was solicited and obtained, and the pertinent data (i.e., site area, projected site life, approximate volumes, types of waste, and leachate handling techniques) acquired through question/answer sessions and personal staff investigation of the sites. These investigations also included the photographing of certain areas for later analysis and documentation. These photographs are available in the H-GAC library. In cases where site managers and/or site investigations were unable to provide the necessary data, follow-up telephone calls to owners and/or supervising governmental officials provided the information needed. Due to secrecy agreements at most industrial disposal sites, photographs were not taken.

RETURN TO:
TEXAS WATER QUALITY BOARD
SOLID WASTE BRANCH
P.O. BOX 13246, CAPITOL STATION
AUSTIN, TEXAS 78711

PURSUANT TO TWQB ORDER NO. 75-1125-1

INDUSTRIAL SOLID WASTE MANAGEMENT INVENTORY

DEFINITION: Industrial Solid Waste - wastes in liquid, semi-liquid or solid form resulting from or incidental to any process of industry, manufacturing, mining, or agricultural operation. This includes wastes resulting from wastewater or water treatment and air pollution control activities, such as sludges, precipitates, and other removed substances. Wastewaters authorized for discharge by a Texas Water Quality Board Permit are excluded.

Does you firm generate an Industrial Solid Waste in Accordance with the above definition? ☐ Yes ☐ No

If the answer to the above question is "yes", complete Parts I and II of this form; if the answer is "no" complete Part I.

PART I: Enter the appropriate information in spaces below.

Division or Plant Address (if different from above): _____ (Name) _____ (Address) _____ (County) _____ (Zip)

Person in charge of Solid Waste: _____ Title: _____ Phone: _____

TWQB Permits or Registrations (if any): _____

I certify the information provided herein is complete and accurate to the best of my knowledge. _____ (Signature) _____ (Date)

PART II: Waste Inventory Table — On the reverse side enter the indicated information and mark the appropriate boxes. In Column 1 describe and identify components of each waste as generated prior to disposal with other wastes and identify the source of the waste. Before completing Column 4, read sections 1.02-17 and 1.02-20 of the enclosed regulations; if on-site disposal is indicated, enter the number from the bottom of the page corresponding to the method(s) of disposal. If more space is needed, duplicate this blank form and/or attach additional information as needed. Refer to the example below.

WASTE DESCRIPTION	2. FORM	3. ESTIMATED MONTHLY AVERAGE	4. DISPOSITION	TWQB USE ONLY RN
Waste No. 1 of 1 Description: Spent acid solution, containing Cr, Cu, Fe, Zn Source (SIC Code, if known, 3471) Metal Pickling Process Check one: ☐ organic ☒ inorganic ☐ unknown Check one: ☒ acidic ☐ alkaline ☐ unknown	☒ liquid, water base ☐ liquid, other base ☐ solid ☐ sludge/slurry ____ % solids	amount: 14.0 ☐ gallons ☐ tons ☐ cubic yards ☒ drums (55 gal.)	☒ Off-site: estimate shipments/month: 2 per month ☐ On-site, list methods of disposal: ____, ____, ____, ____, ____	WCC

EXAMPLE

*ON-SITE METHODS OF DISPOSAL:

0 - Other than Below (describe), 1 - Biological Treatment, 2 - Chemical Treatment, 3 - Volume Reduction, 4 - Recovery, 5 - Storage, 6 - Dumping, 7 - Landfill, 8 - Landfarm, 9 - Incineration, 10 - Injection Well, 11 - Lagoon or Ponds

FIGURE A

FIGURE B

Date_____

Operator_____

Surveyors _____

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name_____

Facility Address_____

Permit Type_____ Permit #_____

Type(s) of Waste_____ Quantity_____

_____ _____

_____ _____

Site Area _____ Land Usage Rate/Yr._____

Land Remaining_____

Life Expectancy_____

Relationship to Nearby Watercources_____

_____

Leachate Handling Techniques
(Description & Evaluation) _____

_____

_____

_____

Comments
(Site Adequacy Evaluation)_____

_____

_____

_____

PART III - SUMMARY OF SOLID WASTE PLACEMENT SITES

A. INTRODUCTION

There were a total of 74 commercial, municipal and industrial solid waste placement sites considered in this survey. Other placement sites exist but were not included because there was no record of their location; i.e., unlicensed sites, unregistered sites, sites not included in previous surveys or small Class III industrial sites. However, this survey does include the major solid waste placement sites that could affect water quality in the Houston 208 Planning Area.

This survey has determined that sixty-seven (67) of these sites do not appear to have a detrimental effect on the surface water quality in the Houston 208 Study Area as a result of leachate generation. There are seven (7) sites, however, that could present potential intermittent water quality problems due to leachate generation. These sites are included in the following discussions.

B. COMMERCIAL PLACEMENT SITES

After consulting the appropriate base data it was determined that there were 23 commercial disposal sites in the Houston Section 208 (PL 92-500) Study Area. The smallest site in terms of size was the Browning-Ferris Industries Chemfix Operation which was 1½ acres, and the largest site was Waste Products, Incorporated at 215 acres. In terms of volume, the smallest site was Carter Swint Dumping and Demolition Company with 25 yds^3/day, and the largest volume was placed at the Browning-Ferris Industries site at Holmes Road with approximately 14,000 yds^3/day. The total of all of the Commercial site areas was approximately 1,000 acres, with an approximate volume of 915,000 yds^3/month.*

This survey concludes that the majority of these placement sites pose no immediate water quality problems due to leachate generation. However, several sites could cause surface water contamination due to storm water induced leachate. These sites are Western Refuse, Incorporated; J. D. Giddings Company; and Southwestern Barge Fleet Service. The Livingston Construction Company, Incorporated site did not have the required dikes to contain leachate but allowed leachate to run into a holding pond which has created no surface water quality problems.

*This figure includes the City of Houston residential waste. The City of Houston does not operate any solid waste disposal sites; it is contracted to a private firm.

Tabular presentations and individual reports on commercial operations are contained in Parts IV-A and V-A respectively.

C. MUNICIPAL PLACEMENT SITES

This survey found 9 municipal placement sites in the Houston 208 Study Area. These sites ranged in size from 5 acres at the Prarieview A&M site to 89 acres at the City of Pasadena Site. The volume of material ranged from approximately 8 yds^3/day at the City of West University site to approximately 1,200 yds^3/day at the City of Pasadena site. The total of all of the Municipal site areas was approximately 350 acres, with a total volume of approximately 75,000 yds^3/month.

There were three sites that appeared to have a great potential to reduce water quality near their areas of operation due to leachate generation. The City of Jacinto City, Galena Park and Prarieview A&M sites did not have the cover material required by State of Texas Regulations.* These sites could produce leachate as a result of even a light rainfall.

Tabular presentations and individual reports on municipal operations are contained in Parts IV-B and V-B respectively.

D. INDUSTRIAL PLACEMENT SITES

There were 42 industrial placement sites considered in this survey. These sites ranged in size from a 20 ft^2 site at Challenge Machine Works, Incorporated to an 800 acre site owned by Gulf Oil Chemicals, Incorporated. The range in volume was from about 1 gal./month at Challenge Machine Works, Incorporated, to 2,900 tons/day at the Olin Corporation site. The total of all of the Industrial site areas was approximately 1,800 acres, with an approximate weight of 266,500 tons/month.**

In general the sites operated such that leachate was contained or collected and treated before discharge.

There were two industrial placement sites that could be affected by large storm surges from major hurricanes - these sites were the Exxon site in Baytown and the Ethyl Corporation site in Pasadena.

Tabular presentations and individual inventory reports on industrial operations are contained in Parts IV-C and V-C respectively.

*At least 6" of daily cover.

**There were 165,090 yd^3/month reported in addition to the 159,210 tons/month reported. A factor of 1300 lbs/dy^3 was used to calculate a tonnage figure of 107,300 tons/month.

PART IV

TABLE I

COMMERCIAL SOLID WASTE OPERATIONS

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Addicks-Fairbanks Rd. Sand Company 6415 Addicks-Fairbanks Road Houston, Texas	Harris Co.	II	Refuse Construction Brush	7500-10,500 yds^3/month	52 acres/ 50 acres	20-25 Yrs.	Horse Pen Creek/ 1007
American Refuse Systems 1110 Holmes Road Houston, Texas (Closed since survey)	TSDH	I Commer.	Municipal Commercial	420,000 yds^3/ month	23 acres/ 12 acres	5 mos.	Sims Bayou/ 1006 Brays Bayou/ 1006
American Refuse Systems 1110 Holmes Road Houston, Texas (Opened since survey)	TSDH	I Commer.	Municipal Commercial Demolition	Not yet in use	75 acres/ 75 acres	2 Yrs.	Sims Bayou/ 1006 Brays Bayou/ 1006

TABLE I (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Browning-Ferris Ind. 11013 Beaumont Hwy. Houston, Texas	TSDH	I Commer.	Municipal	276,000 yds^3/ month	196 acres/ 100 acres Landfill	5-6 yrs.	Greens Bayou/ 1006
Browning-Ferris Ind. Chemfix Operation 11013 Beaumont Hwy. Houston, Texas	TSDH	I Ind.	Liquid acids Caustic	100,000 gals/ month	1½ acres/ 1½ acres Lagoons	Indef.	Greens Bayou/ 1006
Carter Swint Dumping & Demolition Company 2727 Desoto Street Houston, Texas	April, 1971	II	General Refuse Demolition waste Inert Materials	750 to 3,000 yds^3/month	3½ acres/ 1 acre Landfill	5+ yrs.	White Oak Bayou/ 1007

*GCWDA Staff estimate.

TABLE I (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain. Site Life	Closest Water Course/ Seg. #
Casco Hauling and Excavating Company 1306 East Anderson Houston, Texas	TSDH	V	Concrete Rock Dirt	Inactive	5 acres/ 5 acres Landfill	N/A	Sims Bayou/ 1006 Clear Creek/ 1102
Doty Sand Pit, Inc. 12000 Bissonett Houston, Texas	Harris Co.	II	Demolition Construction Brush Paper	16,670 yds^3/ month	70 acres/ 70 acres Landfill	10 Yrs	Brays Bayou/ 1006 Keegan's Bayou/ 1006
Gulf Metals Industries 6700 Telean Houston, Texas	TWQB 20406	III	Demolition Metals Slag Ash residue	1000 to 1200 tons/month	16 acres/ 3 acres Dump	1 to 1½ yrs	Clear Creek/ 1102 Sims Bayou/ 1006

TABLE I (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Harris Landfill (formerly C.C. Murray) 4211 Clow Road Houston, Texas	Harris Co.	I Commer.	Construction Brush (Will not take municipal)	9,000 yds^3/ month	50 acres/ 46 acres Landfill	10 yrs.	Cypress Creek/ 1009
Hazelwood, Gene B. Ferry Road & Hwy. 146 Baytown, Texas	TSDH	I Commer.	Municipal	21,600 yds^3/ month	22 acres/ 22 acres	7-8 yrs.	Cedar Bayou/ 0901
John M. Kilgore/ J. D. Giddings Co. 9500 Needlepoint Rd. Baytown, Texas	TWQB 20031	II	Filter Cake Demolition Waste paper	2700 yds^3/mo.	10 acres/ 8 acres Landfill	4* yrs.	Cedar Bayou/ 0902

*GCWDA Staff estimate.

TABLE I (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Lewco Company (Probably now the Whitehead Company) Clara Road Houston, Texas	TWQB 20022	II	Demolition Brush Plastic pipe Barrels	Inactive (Permit not issued)	50 acres		Cole Creek/ 1007
Liberty Waste Disposal Company Steele Road at Ellis School Road Harris County	TWQB 20106	II	Paper Wood Plastics Metal products Industrial wastes	36,000 yds^3/ month	40 acres/ 25 acres	5 yrs	Trinity River Canal/NA San Jacinto River/ 1001

TABLE I (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Livingston Construction Company, Inc. 12701 Bissonett Houston, Texas	Harris Co.	II	Demolition Construction Paper Oil and beer cans	30,000 to 45,000 yds^3/month	56 acres/ 22-27 acres	3½ to 4 yrs.	Keegans Bayou/ 1007
McDonald, James G. 7500 Liberty Road Houston, Texas	TWQB 20283	II	Active	N/A	22.81 acres/ 22.81 acres	N/A	Hunting Bayou/ 1006
Rollins Environmental Tidal Road Houston, Texas	TWQB NPDES 01429	I	Sludge and Hazardous Waste	8 tons/month	8-10 acres/ 35 acres	20 yrs	Tuckers Bayou/ 1006 Patrick Bayou/ 1006 Houston Ship Channel/ 1006
Southwestern Barge Fleet Service 18300 Market Street Road at San Jacinto River Channelview	None *	N/A	Demolition Paper Municipal	Unknown	10-15 acres/ none	None	San Jacinto/ 1001 Old River/NA

*Application only

TABLE I (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Tex-Haul, Inc. 7600 Tidwell Houston, Texas	TWQB 20277	II	Misc. Dumping	Site completely full & closed	10 acres/ None	None	Halls Bayou/ 1006
Walker's Sand Pit Bayport Blvd. and East Repsdorph Seabrook, Texas	N/A	N/A	Demolition Paper	Currently Inactive	50+ acres/ 50 acres	N/A	Galveston Bay/2421 Unnamed Creek/ 2421
Waste Products, Inc. F.M. 1942 at Garth Rd.	Application only	II	N/A	Inactive	215 acres/ 215 acres	N/A	Cedar Bayou/ 0902
G. O. Weiss, Inc. 5547 Addicks-Satsuma Rd. Houston, Texas	Harris Co.	II	General Refuse Wood Tires Paper Metal	39,000 yds^3/ month	97 acres/ 50 acres	4-5 yrs.	Langham Creek/ 1007
Western Land Reclamation (Western Refuse) 12712 Church Houston, Texas	TWQB 20439	II	Industrial Construction Drums	40,000 yds^3/ month	23.8 acres/ 10 acres	5 yrs.	Green Bayou/ 1006

*GCWDA Staff estimate.

TABLE II

MUNICIPAL SOLID WASTE OPERATIONS

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Baytown, City of McLean Road, off Wade Road Baytown, Texas (Site closed since survey)	TSDH	I.	Municipal Demolition Brush Sludge	14,400 yds^3/ month	7 acres/ 5 acres	6 to 8 mos.	Goose Creek/ 2426
Bellaire, City of 9720 Ruffino Road Houston, Texas	Harris Co.	II	Municipal Demolition Brush Sludge	6,000 yds^3/ month	75 acres/ 8 acres	3½ to 4 yrs.	Keegans Bayou/ 1006
Galena Park, City of 701 19th Street Galena Park, Texas	TSDH	I	Municipal Demolition Brush	2,400 yds^3/ month	25 acres/ 15 acres	5 to 6 yrs.	Hunting Bayou/ 1006
Harris County Site #3* Broadway Street La Porte, Texas	Harris County #15	I	Municipal Demolition Brush Sludge	15,000 yds^3/ month	34 acres/ 8 acres	1 yr.	Houston Ship Channel/ 2421 Galveston Bay
Jacinto City, City of 703 19th Street Galena Park, Texas	Harris Co.	I	Municipal Demolition Brush	960 yds^3/ month	20 acres/ 1 acre	None	Hunting Bayou/ 1006

TABLE II (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Katy, City of F. M. 2855	TSDH	I	Municipal	500 yds^3/ month	21 acres/ 16 acres	10 yrs.	F.M. 2855 Drainage Ditch/ 1007 Live Oak Creek/ 1007 Cypress Creek/ 1009
Pasadena, City of Burke Road at Crenshaw Road Pasadena, Texas	TSDH #109	I	Municipal	36,000 yds^3/ month	89 acres/	3 yrs	Little Vince Bayou/ 1006 Vince Bayou/ 1006
Prairie View A & M College Prairie View	Waller County Health Dept.	I	Municipal Demolition Construction Automobiles	Not Available	5 acres/ 5 acres	2 yrs	Spring Creek/ 1008 Mound Creek/ 1009 Cypress Creek/ 1009

TABLE II (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
West University Place, City of 9610 Ruffino Road Houston, Texas	Harris Co.	I	Municipal	230 yds^3/mo.	75 acres/ 25 acres	6 yrs	Keegans Bayou/ 1006

TABLE III

INDUSTRIAL SOLID WASTE OPERATIONS

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
American Smelting/ Federated Metal 9200 Market Street Houston, Texas	TWQB 20262	III	N/A	Inactive	N/A	N/A	Houston Ship Channel/ 1006 Hunting Bayou/ 1006
Armco Steel Corporation 12600 Greens Bayou Houston, Texas	TWQB 20101	III	Filter Cake from air pollution scrubbers (slurry)	2250 tons/ month	9.47 acres/ 9.47 acres Landfill	10 yrs	Greens Bayou/ 1006
Ashland Chemical Co. North and Ashby Baytown, Texas	TWQB 20378	II	Rubber waste	450 to 5,460 yds^3/month	3-4 acres / 3-4 acres Lagoons	15 yrs.	Scott Bay/ 2429 Houston Ship Channel/ 1005
Atlantic Richfield Co. 1200 Lawndale Houston, Texas	TWQB 20372	I	Oily sludges Lead contaminated sludge Perlite Zeolite Anthracite Coal Filter Clays	16.44 tons/mo.	40-50 acres/ 40-50 acres	Indef.	Sims Bayou/ 1006 Houston Ship Channel/ 1006

TABLE III (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Cameron Iron Works 22301 U.S. Hwy. 290 Harris County	None	I II	Furnace Dust Wastewater sludge	30 tons/month 10 yds^3/month	1.2 acres/ .6 acres Landfill- pond	5 yrs.	Cypress Creek/ 1009 White Oak Bayou/ 1007
Celanese Chemical Co. 9502 Bayport Blvd. Pasadena, Texas	TWQB 20492	I	Water. oil, organic residues Wastewater & organic residues Contaminated dirt CIWA water silt	135,000 gals/ month 3,300,000 gals/ month 5 yds 3/month 140 tons/mo.	100' x 100' lagoon 12 acres/ 12 acres Settling ponds	Indef Indef	Big Island Slough/ 2425 Taylor Bayou/ 2425
Challenge Machine Works, Incorporated 6460 Aldine-Bender Rd. Humble, Texas	None	I	Organic soluble oil base liquid	1 gal/month	120' x 140' 120' x 140' 2' x 10' dump area along fenceline	Indef	Greens Bayou/ 1006

TABLE III (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Chance, A.B. Company 12317 Almeda Road Houston, Texas	TWQB 20697	I	Sulfuric acid Iron & Zinc caustic	25,000 gals/ month	60' x 40'/ 60' x 40' Lagoon	Indef	Sims Bayou/ 1006
Continental-Emsco Co. 7600 S. Santa Fe Drive Houston, Texas	None	I	Waste oil Coolants Solvents	290 gals/mo.	20 acres/ 20 acres roadbed dump	Indef	Sims Bayou/ 1006
Diamond Shamrock Corp. Greens Bayou Plant 2239 Haden Road Houston, Texas	TWQB 20286	I	Salts contaminated with herbicides	300 to 2,250 y tons/mo.	7.19 acres/ 3.5 acres Landfill	3 yrs	Greens Bayou/ 1006
Diamond Shamrock Corp. Deer Park Plant Tidal Road Houston, Texas	TWQB 20285	II	Polyvinyl chloride	150 tons/mo.	5.62 acres/ 5.62 acres Landfill	18-24 mos.	Patrick Bayou/ 1006
			Catalyst Residue	60 tons/mo.	5.23 acres/ 5.23 acres settling pond	3-5 yrs.	Tuckers Bayou/ 1006
		I	Mercury filter cake	15 to 60 yds^3/ month	.33 acres/ .33 acres settling pond	5-7 yrs.	Houston Ship Channel/ 1006

TABLE III (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Dresser Industries, Inc. 10201 Westheimer Rd. Houston, Texas	TWQB 00469-01	II	Sewage plant sludge	¼ yds^3/month	20' x 50'/ 20' x 50'	Indef Drying beds and landfill	Buffalo Bayou/ 1007
Du Pont Company Du Pont Road La Porte, Texas	TWQB 20416	I & III	Calcium sulfate	32,700 yds^3/ month Landfill	6,225,000 yds^3 3,350,000 yds^3	8 yrs.	San Jacinto Bay/ 2427
			Settled solids from treatment ponds	80 yds^3/mo.	95,370 yds^3	7 yrs.	San Jacinto Bay/ 2427
			Mn, Zn, hydroxides	420 yds^3/mo.	6,800 yds^3		
			Waste chemicals for equipment cleanouts	20 yds^3/mo.			
Ethyl Corporation Hwy. 225 & N. South St. Pasadena, Texas	None	I	Barium sulfate	22 tons/month	30-60 acres/ 30-60 acres Landfarm	Indef	Houston Ship Channel/ 1006 Unnamed Bayou/ 1006
			Water treater sludge	20 tons/month			
			Aluminum residue	17 tons/month			
			Polymer pits residue	1100 gals/mo.			

TABLE III (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Exxon Corporation San Jacinto-Bayway - Wooster Cedar Bayou Baytown, Texas	TWQB 20658	I	Sludges Oily sediment	13,296 yds^3/ month	20 acres/ 20 acres settling ponds & landfills	10 yrs.	Houston Ship Channel/ 1005 Scott Bay/ 2429 Black Duck Bay/2428
Goodyear Tire & Rubber 2000 Goodyear Dr. Houston, Texas	TWQB 20502	II	Waste rubber Water treatment solids/sludge Construction wastes Secondary waste-water sludges	470 yds^3/mo. 220 tons/mo. 5 tons/month 1,500,000 gals/ month	11 acres/ 11 acres	20 yrs.	Sims Bayou/ 1006
Green Thumb Products (Formerly Delta Industries) Howton & Fitzhugh Houston, Texas	TWQB 20322	II	Rice hulls	Inactive	8.68 acres/ 8.68 acres pond	Inact.	Halls Bayou/ 1006 Hunting Bayou/ 1006

TABLE III (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Gulf Oil Chemicals Co. 9800 I.H. 10	TWQB 20707	I & II	Treatment and process sludges	15,880,000 gals/month	30' x 50' 30' x 50' Pellet pond 30 acres/ 30 acres Settling ponds 800 acres/ 800 acres Landfarm	10-15 yrs.	Cedar Bayou/ 0902
Ideal Cement Company Penn City Road Houston, Texas	TWQB 20577	II	Cement kiln dust	0-7,200 tons/ month	42 acres/ 42 acres Landfill	Indef.	Houston Ship Channel/ 1006
Job - Master Sales, Inc. 3731 Pinemont Houston, Texas	None	I	Machine lube oil	3 gals/month	1-1½ acres/ 1-1½ acres Dump area 20' x 20'/ 20 x 20' Settling pond	Indef.	White Oak Bayou/ 1006

TABLE III (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Kirby Steel Products Co. 1102 HUB Houston, Texas	None	I	Hydrochloric acid	1 gal/month	10' x 12'/ 10' x 12' Shell dump area	Indef.	Yates Bayou/ 1006
Landreth Engineering Co. 8700 Scranton Houston, Texas	None	I	Plating line waste	.5 yds^3/month	10 acres/ 10 acres Dump Area Est. at 100' x 140'	2 yrs.	Berry Creek/ 1006
Mid-Continent Pipeline Equipment Company 12000 Fisher Road Houston, Texas	None	II	Spent alkaline detergent solution	55 gals/month		Indef.	Turkey Creek/ 1007 South White Oak Bayou/ 1007
Olin Corporation Davison & First Sts. Pasadena, Texas	TWQB 20105	I	gypsum-calcium sulfate Water treatment plant sludge	87,000 tons/mo.	152 acres/ 150 acres Landfill	6-14 yrs.	Houston Ship Channel/ 1006

TABLE III (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain. Site Life	Closest Water Course/ Seg. #
Olshan Demolishing Co.* 5020 Acorn Houston, Texas	TWQB 20032	II	Demolition Brush Tires	10,000 yds^3/ month	11-12 acres/ Landfill	10-11 mos.	Cole Creek/ 1007 Brickhouse Gully/ 1007 White Oak Bayou/ 1007
Pearsall Chemical Corp.* 9401 Strang Road Deer Park, Texas	TWQB 01785	II	Aluminum hydroxide	16 tons/month	50' x 100'/ 50' x 100' Settling pond 100' x 200'/ 100' x 200' Holding pond	4-6 mos.	Big Island Slough/ 2425 San Jacinto Bay/ 2427
Phillips Petroleum Co. Phillips Company Road Pasadena, Texas	TWQB 20221	I, II & III	Water treater sludge Channel dredgings Polypropylene & polyethylene mix Polyethylene	147-180 tons/mo 6,666-8,333 tons/month 180-240 tons/mo. 19,500-22,500 tons/month	200 acres/ 200 acres Holding ponds & landfill	3-5 yrs.	Houston Ship Channel/ 1006

*Site will close within one year.

TABLE III (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Proler International 7501 Wallisville Road Houston, Texas	TWQB 20743	II	Waste metals	1,770 tons/mo.	20 acres/ 20 acres Landfill	5-10 yrs.	Hunting Bayou/ 1006
Quality Electric Steel Van St. & Deaf Smith Rd. Harris County	TWQB 20466	III	Bentonite clay spent foundry sand	400 yds^3/mo.	20 acres/ 10 acres Landfill	9 yrs.	San Jacinto River/ 1001
Reichhold Chemicals, Inc. 1503 Haden Road Houston, Texas	TWQB 00662	II	Biological sludge Spent motor oil	30 tons/month 55 gals/month	70,000 sq.ft/ 70,000 sq. ft.	1-2 yrs.	Greens Bayou/ 1006 Houston Ship Channel/ 1006
ROC Manufacturing 1605 Brittmore Road Houston, Texas	TWQB 20601	III	Carbon	15 to 60 yds^3/ month	25' x 50'/ 25' x 50' Lagoon	50 yrs.	Turkey Creek/ 1007

TABLE III (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Rohm & Haas Company * 1800 Old Battleground Rd. Deer Park, Texas	TWQB 20212	I	Filter cakes Waste treatment sludge Oil Additive Methacrylate Monomer Triton	1,830 tons/mo. 1,200 tons/mo. 195 tons/mo. 375 tons/mo. 60 tons/mo.	50 acres/ 50 acres Landfill	1 yr.	Patrick Bayou/ 1006 Tuckers Bayou/ 1006 Houston Ship Channel/ 1006
Service Transport Co. 7900 Almeda-Genoa Houston, Texas	TWQB 20479	I	Truck wash water	90-120 gals/mo.	40' x 200'/ 40' x 200' Lagoon	Indef	Clear Creek/ 1102
Shell Chemical Company* Center Street Deer Park, Texas	TWQB 20687	I	Primary solids Secondary sludge Spent solid catalyst	1140 tons/mo. 1 ton/month	25 acres/ 1-2 acres	3-4 mos.	Houston Ship Channel/ 1006 Boggy Bayou/ 1006 Patrick Bayou/ 1006

*Site will close within one year.

TABLE III (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Shell Oil Company Center Street Deer Park, Texas	None	I, II	Acid pit Biological sludge General Disposal Spent solid catalyst Organic lead-bearing solids	2185.5 tons/ month	16 acres/ 6 acres	5-10 yrs.	Houston Ship Channel/ 1006 Boggy Bayou/ 1006 Patrick Bayou/ 1006
Southland Paper Mills, 17500 Garrett Road Harris County	TWQB 01160	II	Wood pulping rejects	30 tons/month	6 acres/ 6 acres Landfill	10 yrs.	San Jacinto River/ 1001
Stauffer Chemical 1632 Haden Road Houston, Texas	TWQB 00541	I	Gypsum anhydrite Calcium fluoride Calcium sulfate-Mud Calcium sulfate-slurry	5000 tons/mo. 100 tons/mo. 70 tons/mo. 20,000 gals/mo	38 acres/ 21.5 acres Landfill	20 yrs	Greens Bayou/ 1006 Houston Ship Channel/ 1006

TABLE III (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Stauffer Chemical 1000 Jefferson Houston, Texas	TWQB 20258	III	Calcium sulfate (waste gypsum)	25,000 tons/ month	32 acres/ 32 acres	12-15 yrs.	Houston Ship Channel/ 1006
Trees of Houston Turney Drive Houston, Texas	TWQB 20419 (Harris County)	II	Trees Brush Wood chips Logs	21,000 yds^3/ month	10 acres/ 10 acres	3-4 yrs.	Halls Bayou/ 1007
Upjohn Company, The Polymer Chemicals Div. Battleground Road Deer Park	TWQB 00663	II	Filter cake diatomaceous earth	1. 8 tons/month	30-40 acres/ 30-40 acres	Indef.	Big Island Slough/ 2425 San Jacinto Bay/ 2427
U.S. Industrial Chemicals Company Miller Cut-off Road La Porte, Texas	TWQB 20523	I II	Waste oil Vinyl acetate	45,000 gals/mo. 19,000 gals/mo.	1 acre/ ½ acre Landfill	Inact.	San Jacinto Bay/ 2427

CLASS III (Cont'd)

Name and Address	Permit	Class	Sources	Approximate Volumes	Site Area/Land Remaining	Est. Remain Site Life	Closest Water Course/ Seg. #
Western Commercial Transport 13600 Old Hwy. 90 Houston, Texas	TWQB 20629	I	Truck wash water (sludge)	11,000 gals/ month	½ to 3/4 acres/ ½ to 3/4 acres Lagoon	Indef.	Sheldon Reservoir/ N/A Carpenters Bayou/ 1006

COMMERCIAL OPERATIONS

Site Investigation Forms

Date February 4, 1976

Operator Charles McGuire

Surveyors Tom Samson and Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Addicks-Fairbanks Road Sand Company

Facility Address 6415 Addicks-Fairbanks, Houston

Permit Type Harris County Permit # N/A

Type(s) of Waste II, Refuse, construction waste, brush, some municipal garbage noted. Quantity 7500-10,500 yds^3/mo.

Site Area 52 acres Land Usage Rate/Yr. 2 acres/year

Land Remaining 50 acres

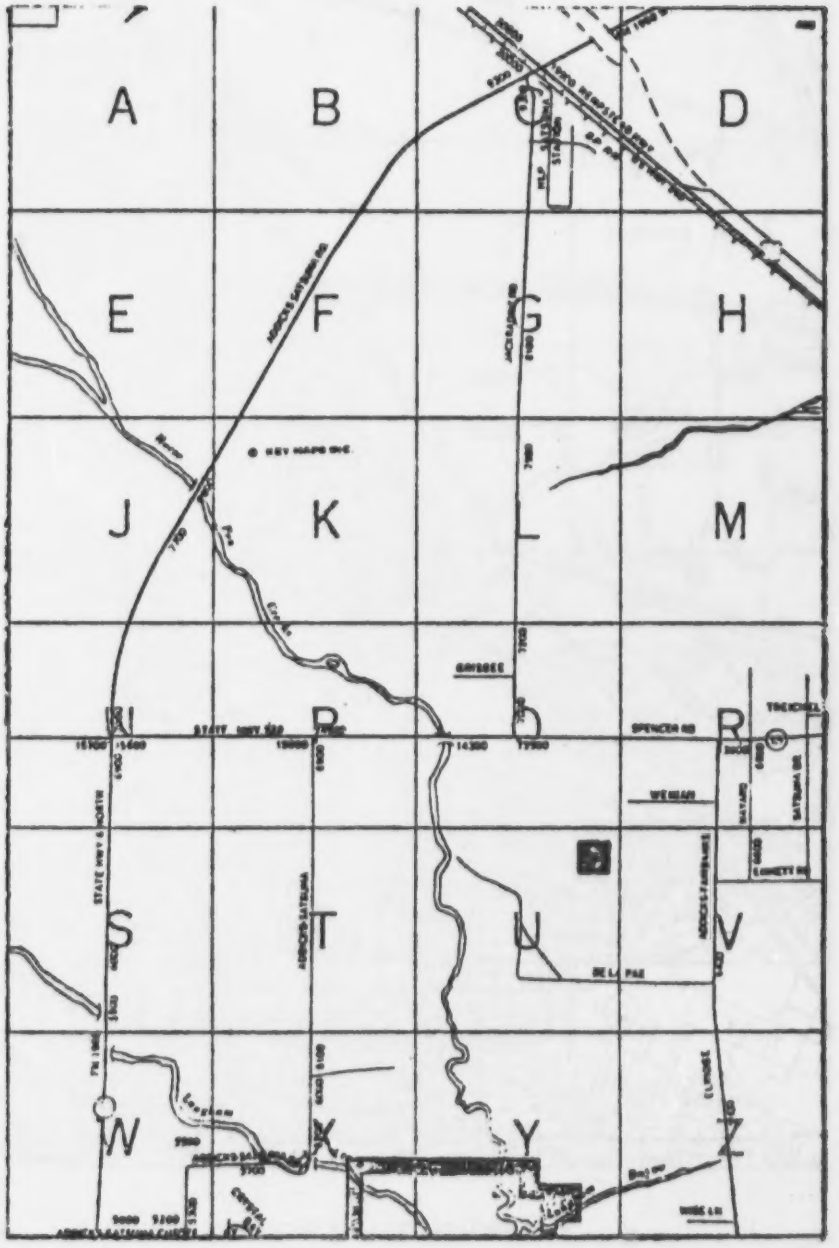
Life Expectancy 20-25 years

Relationship to Nearby Watercourses Horse Pen Creek immediately adjacent to the west side of the site.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities noted. A holding pond had been constructed from which excess water was pumped into Horse Pen Creek.

Comments (Site Adequacy Evaluation) Access road fair but probably rough in wet weather; security good. Site generally adequate for amount and type of waste taken.

ADDICKS-FAIRBANKS ROAD SAND COMPANY MAP



Date February 17, 1976

Operator Jim DeVoe, Tom Sanders

Surveyors Dick Cook and Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name American Refuse Systems

Facility Address 1110 Holmes Road, Houston

Permit Type TSDH Permit # N/A

Type(s) of Waste II Municipal Quantity 420,000 yds^3/mo.

Site Area 23 acres Land Usage Rate/Yr. 37.5 acres/year

Land Remaining 10-15 acres

Life Expectancy 5 months

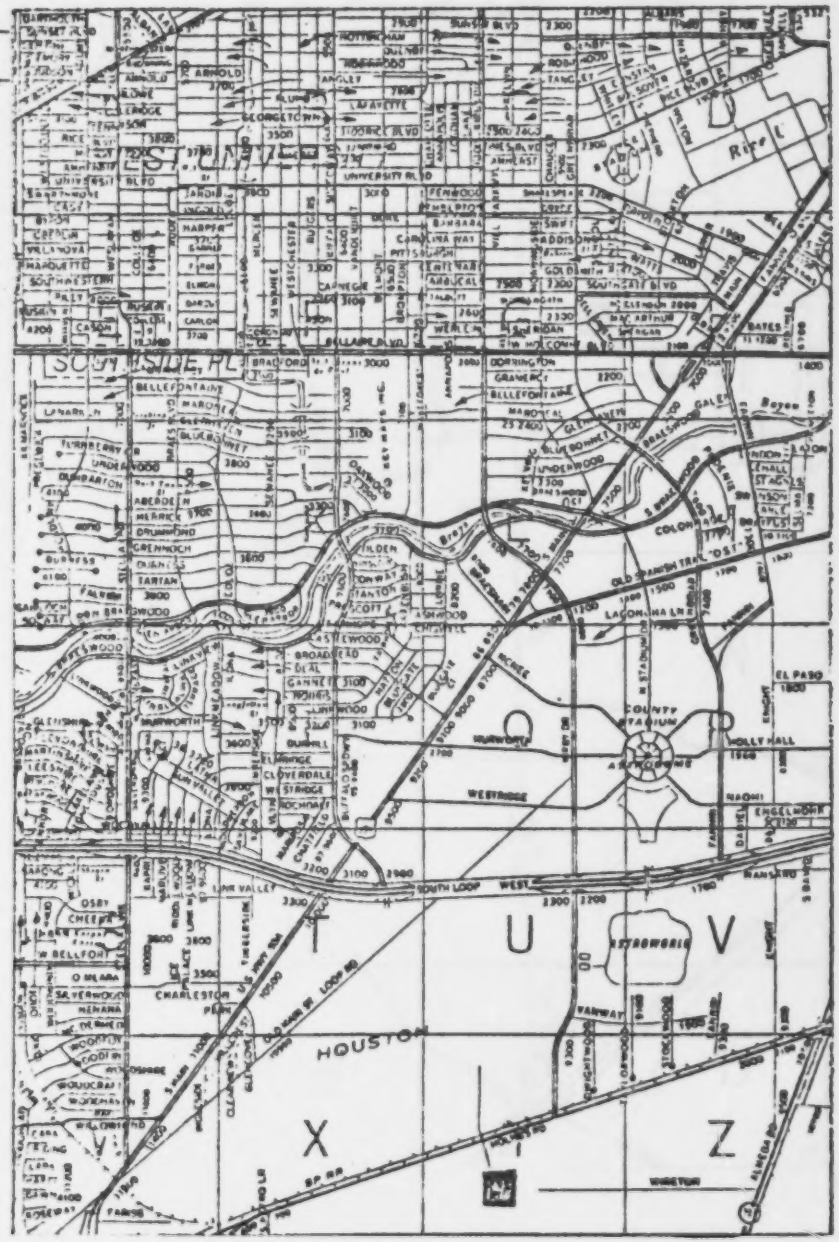
Relationship to Nearby Watercourses Sims Bayou approximately 2 miles due south Brays Bayou approximately 2 miles due north.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities - working faces were covered daily with impervious clay to minimize the necessity for such. No facilities were in evidence for retarding or retaining runoff.

Comments (Site Adequacy Evaluation) Operation at both sites was adequate.

Reproduced from best available copy.

AMERICAN REFUSE SYSTEMS MAP



Date February 17, 1976

Operator Jim DeVoe, Tom Sanders

Surveyors Dick Cook and Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name American Refuse Systems*

Facility Address 1110 Holmes Road, Houston

Permit Type TSDH Permit # N/A

Type(s) of Waste II Municipal and demolition waste Quantity 420,000 yds^3/month

Site Area 75 acres Land Usage Rate/Yr. 30 to 40 acres/year

Land Remaining 75 acres

Life Expectancy 2 years

Relationship to Nearby Watercources Sims Bayou approximately 2 miles due south, Brays Bayou approximately 2 miles due notrh.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities - working faces were covered daily with impervious clay to minimize the necessity for such. No facilities were in evidence to retard or retain runoff.

Comments (Site Adequacy Evaluation) *New permit site just under way. Operation at both sites was adequate.

AMERICAN REFUSE SYSTEMS MAP

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Date February 17, 1976

Operator Robert Dixon

Surveyors Bill Stullken and Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Browning-Ferris Industries

Facility Address 11013 Beaumont Highway, Houston

Permit Type TSDH Permit # N/A

Type(s) of Waste II Municipal Quantity 276,000 yds^3/month

Site Area 196 acres Land Usage Rate/Yr. 20 acres/year

Land Remaining 100 acres

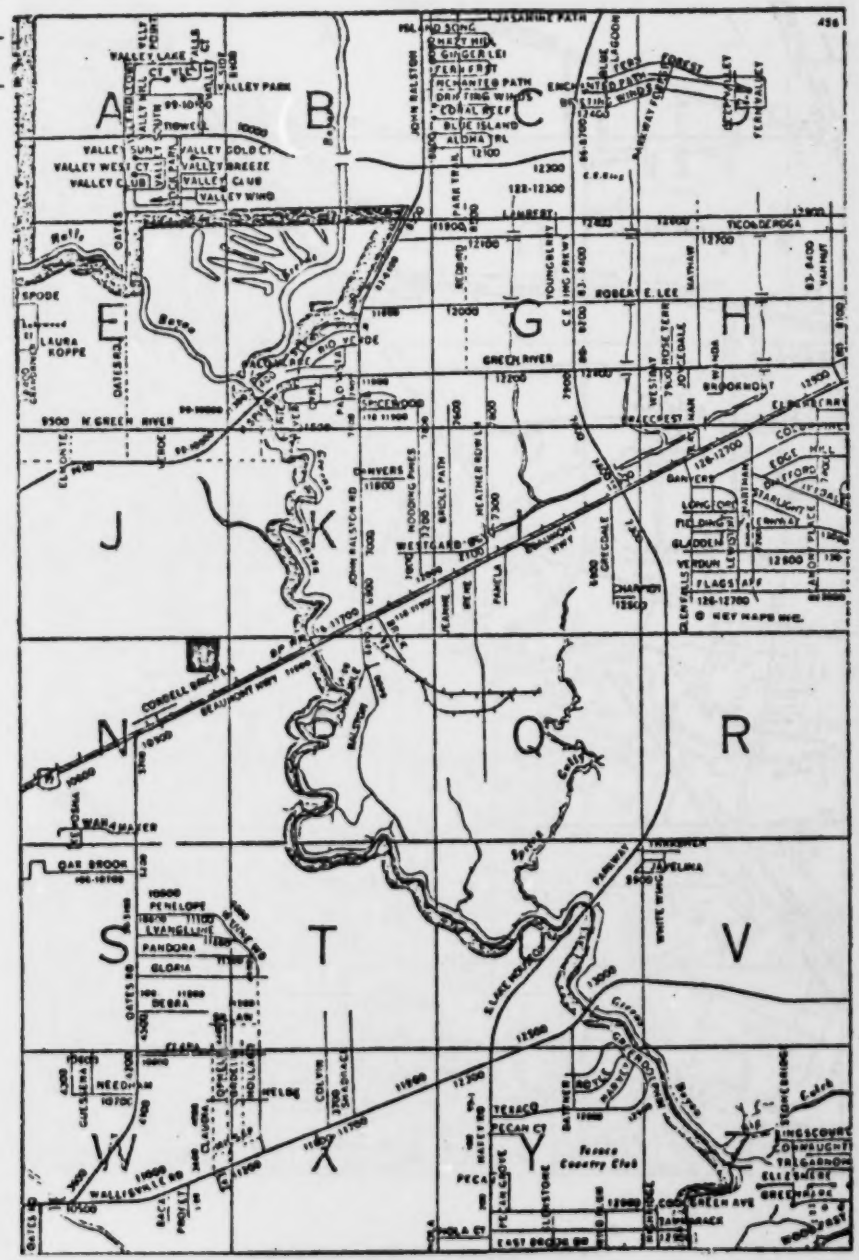
Life Expectancy 5 to 6 years

Relationship to Nearby Watercources Green's Bayou approximately 1/3 mile to the northeast, and swampland covers much of the site.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities; working faces were covered daily with impervious clay to minimize the necessity for such. A holding pond catches some runoff which is reused for settling roadbeds. Most runoff from the working faces enters Green's Bayou by way of the swamp.

Comments (Site Adequacy Evaluation) Site had good all-weather access, good security, and appeared adequate for the type and quantity of waste being deposited.

BROWNING-FERRIS INDUSTRIES MAP



Date March 10, 1976

Operator Bob Heflin, Gene Lanahan

Surveyors Bill Stulliken and Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Browning-Ferris Industries - Chemfix Operation

Facility Address 11013 Beaumont Highway, Houston Phone: 675-6101

Permit Type TSDH Permit #

Type(s) of Waste 1. Inorganic liquid Quantity 100,000 gals per month

acids/caustic

Site Area 1½ acres-lagoons Land Usage Rate/Yr. N/A

Land Remaining 1½ acres

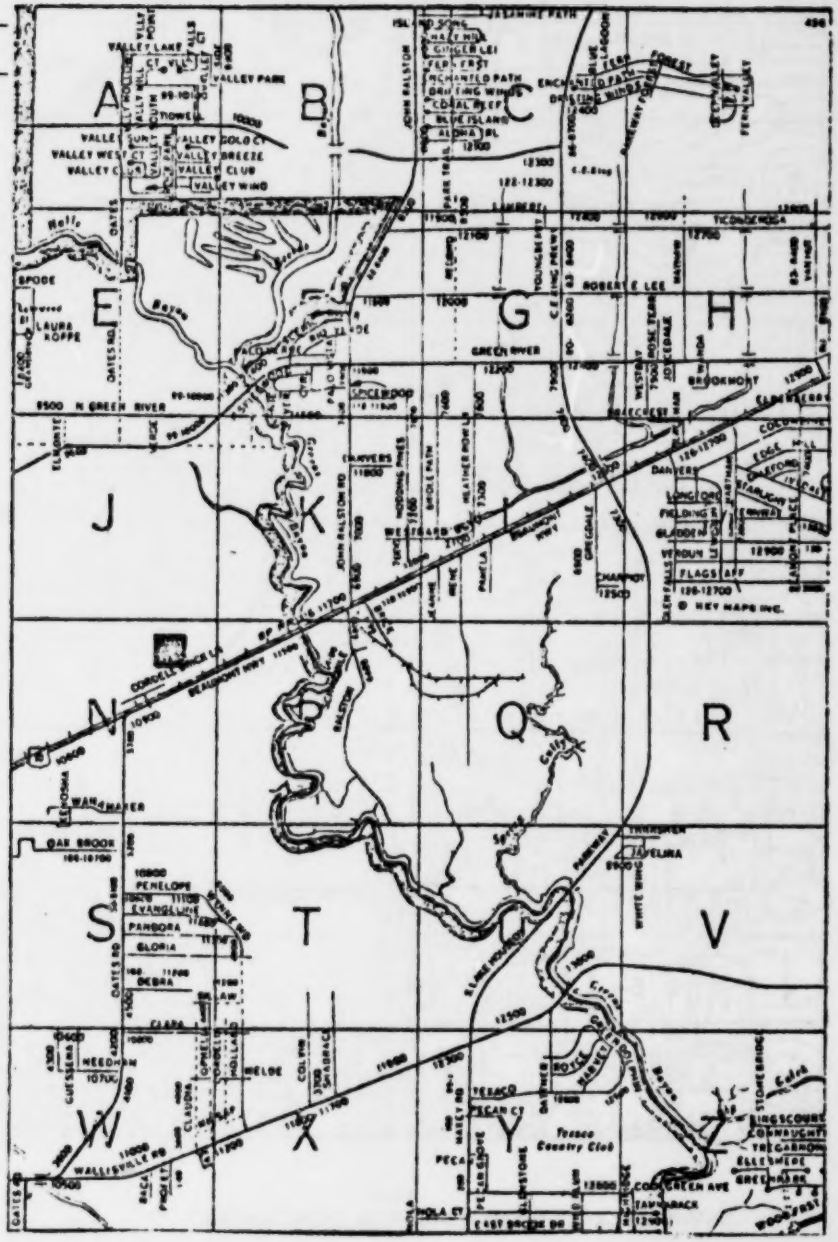
Life Expectancy Indefinite

Relationship to Nearby Watercources Green's Bayou due east of the site.

Leachate Handling Techniques
(Description & Evaluation) No leachate facilities per se. Lagoons have usual raised boundaries and proper drainage so runoff kept separate from lagoons. Treated water reused to control dust on roads.

Comments
(Site Adequacy Evaluation) Site appeared adequate.

BROWNING-FERRIS INDUSTRIES MAP
CHEMFIX OPERATION



38

Date March 10, 1976

Operator Carter Swint

Surveyors Bill Stulliken
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Carter Swint Dumping & Demolition Company

Facility Address 2727 Desoto Street

Permit Type Permit applied for Permit # _____

Type(s) of Waste Demolition waste and general refuse, inert materials Quantity 750 to 3,000 yds^3/month

Site Area 3½ acres Land Usage Rate/Yr. 0.2 acres/yr.

Land Remaining 1 acre

Life Expectancy 5 yrs.*

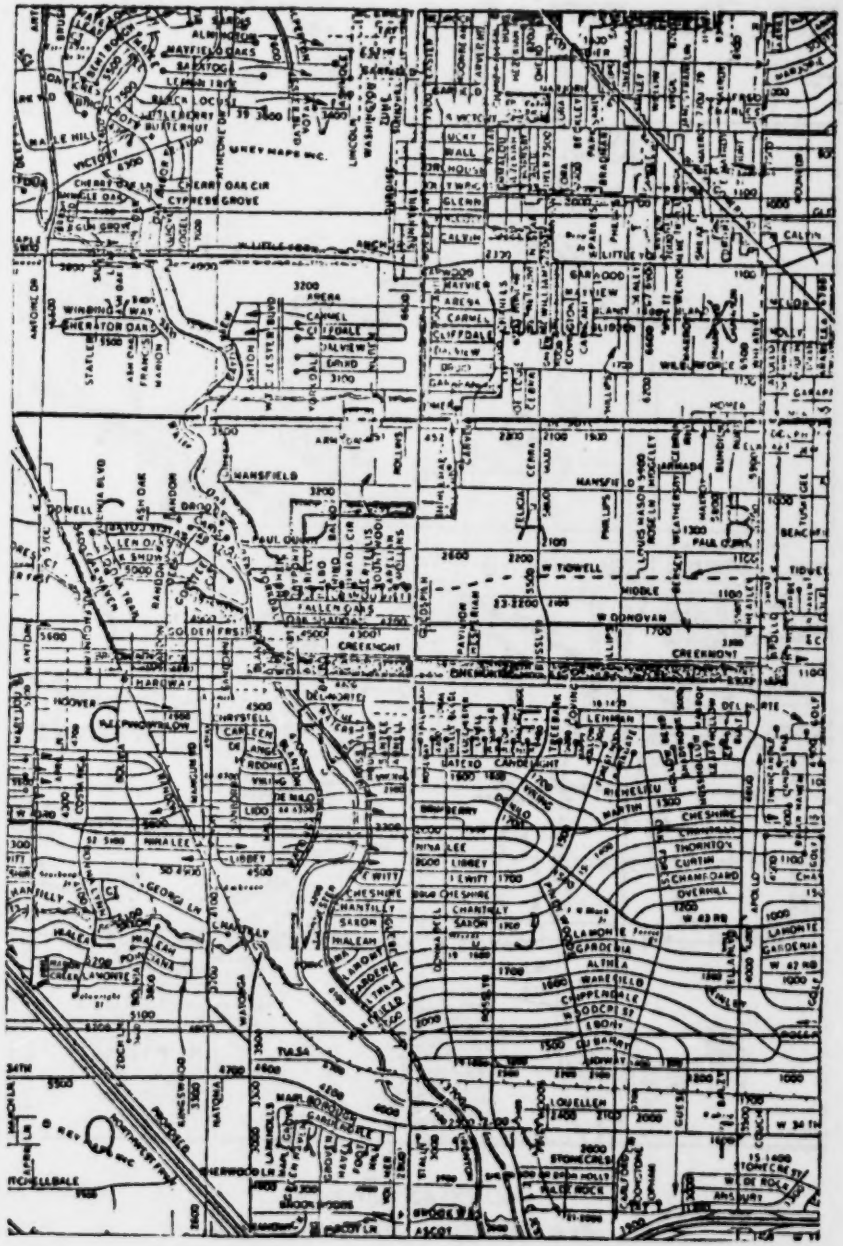
Relationship to Nearby Watercourses White Oak Bayou, ½ mile due west of site.

Leachate Handling Techniques
(Description & Evaluation) No leachate facilities. Large area for holding pond had very little water enclosed. Site operator pumps water at times upon his own undisturbed land area for natural percolation process.

Comments
(Site Adequacy Evaluation) Mostly inert materials, and though aesthetically unpleasant, the site is probably not detrimental to the active environmental system.

*GCWDA Staff estimate.

CARTER SWINT DUMPING & DEMOLITION COMPANY
MAP



Date March 11, 1976

Operator Mr. Lippincott

Surveyors Tom Samson and Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Casco Hauling and Excavating Company* Phone 433-2421

Facility Address 1306 East Anderson Road - South of Almeda/Almeda Genoa

Permit Type Applied for Permit #

Type(s) of Waste Concrete, rock and dirt. Quantity

Site Area 5 acres Land Usage Rate/Yr.

Land Remaining 5 acres

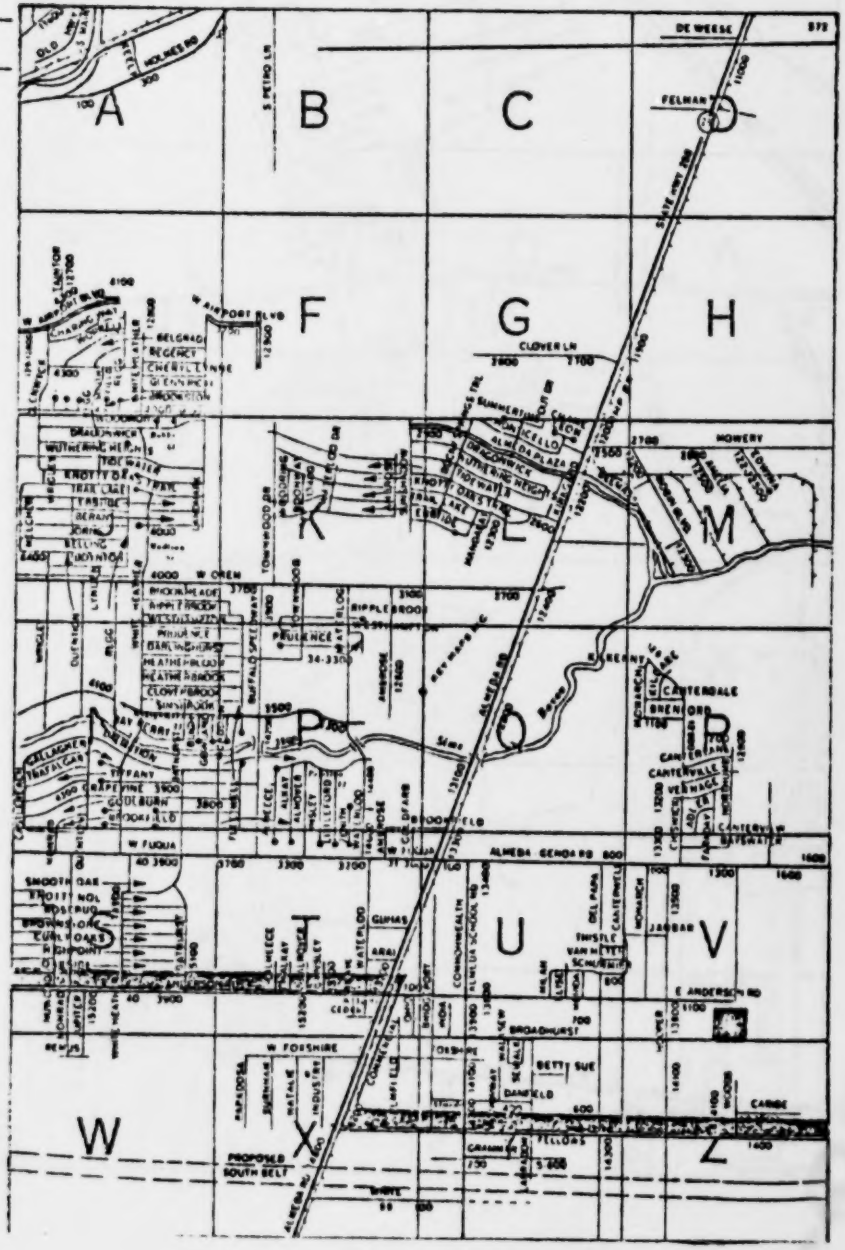
Life Expectancy Application Pending - Inactive Currently

Relationship to Nearby Watercources Sims Bayou 1½ miles due north, Clear Creek 1½ miles due south.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities. Large holding pond and pump were in evidence although no waste was at present being disposed of.

Comments (Site Adequacy Evaluation) *Commercial Sand Company had at one time applied for a permit for this site and occasionally hauls into the site. No waste currently being deposited but the site appeared adequate and was clay lined.

CASCO HAULING AND EXCAVATING COMPANY MAP



Date February 3, 1976

Operator Ronnie McCalfy

SOLID WASTE DISPOSAL SITE

Surveyors Tom Samson and Mike Johnson

Inventory

Facility Name Doty Sand Pit, Inc.

Facility Address 12000 Bissonett

Permit Type Harris County Permit # N/A

Type(s) of Waste H. Wood, concrete, paper, brush, construction wastes

Quantity 16,670 yds^3/month

Site Area 20 acres and 50 acres adjacent Land Usage Rate/Yr. 7 acres/year

Land Remaining 70 acres

Life Expectancy 10 years

Relationship to Nearby Watercources Flood control ditch borders the site to the north and empties into Brays Bayou. Keegan's Bayou 3/4 mile due south.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence. Runoff collects in large holding ponds.

Comments (Site Adequacy Evaluation) Site appeared adequate for the type and quantity of waste taken - good access and security. Some vapors were noticed from possible municipal putrescence.

DOTY SAND PIT, INC. MAP

Date February 4, 1976

Operator Dale Parsons

Surveyors Tom Samson and Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Gulf Metals Industries, Inc.

Facility Address 6700 Telean, Houston Phone: 928-3111

Permit Type TWQB Permit # 20406

Type(s) of Waste Ill. Demolition waste, incineration residue of metal, solids, ash, slag Quantity 1000 to 1200 tons/month

Site Area 16 acres Land Usage Rate/Yr. 2 acres/year

Land Remaining 3 acres

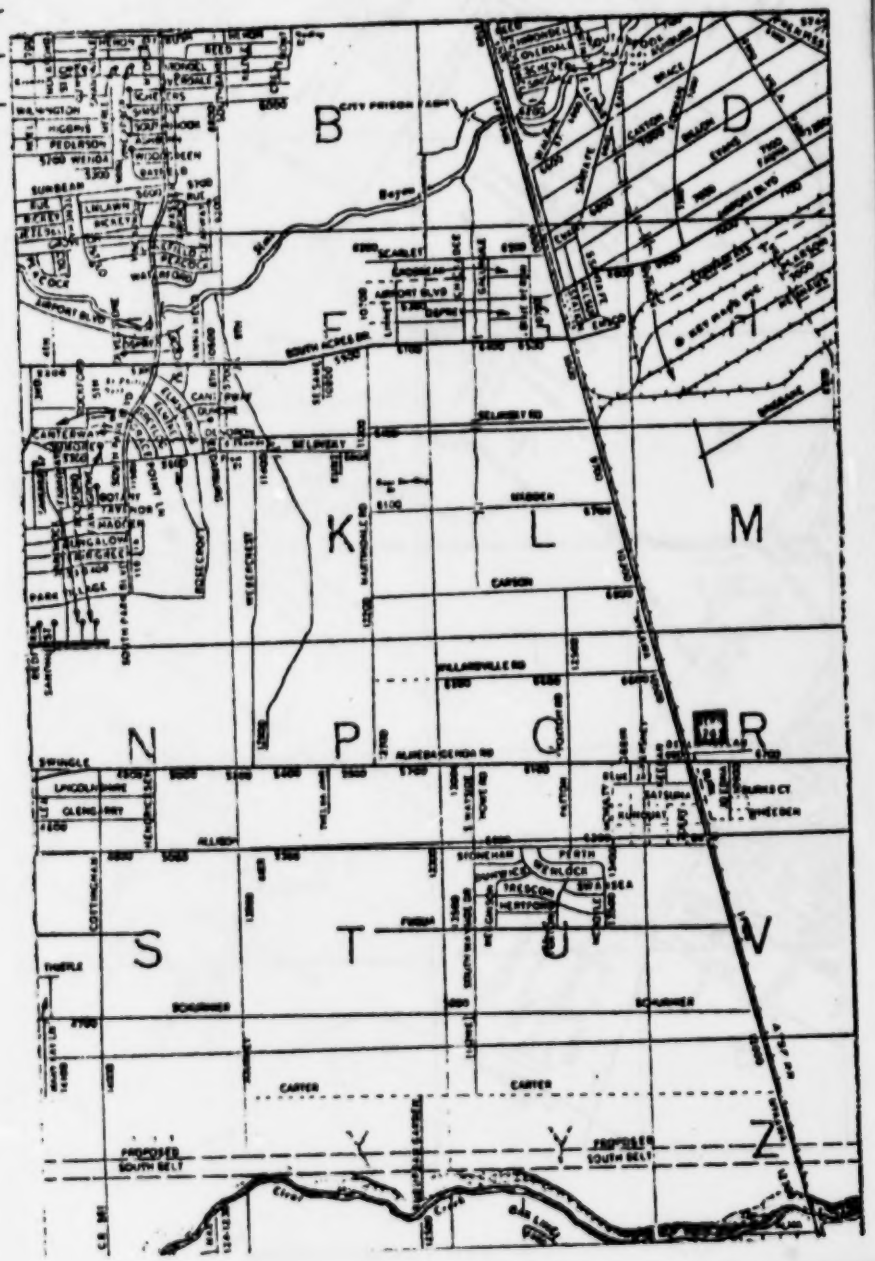
Life Expectancy 1 to 1½ years

Relationship to Nearby Watercourses Clear Creek lies 1-3/4 miles due south, Sims Bayou 2 miles due north.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence. A portable pump on hand to remove standing water to adjacent ATSF railroad ditch.

Comments (Site Adequacy Evaluation) Aesthetically unpleasant and cluttered. A gate was operable but not secured. Access from adjacent railroad track appeared easy. Cover was lacking over the inert materials in many areas.

GULF METALS INDUSTRIES, INC. MAP



Date February 5, 1976

Operator Floyd Harris

SOLID WASTE DISPOSAL SITE

Surveyors Tom Samson and Mike Johnson

Inventory

Facility Name Harris Landfill (formerly C. C. Murray)

Facility Address 4211 Clow Road - off Steubner-Airline Road

Permit Type Harris County Permit # N/A

Type(s) of Waste I. Municipal Quantity 9,000 yds^3/month

II. Industrial. Basically construction waste and brush.

Site Area 50 acres Land Usage Rate/Yr. 4 acres/year

Land Remaining 46 acres

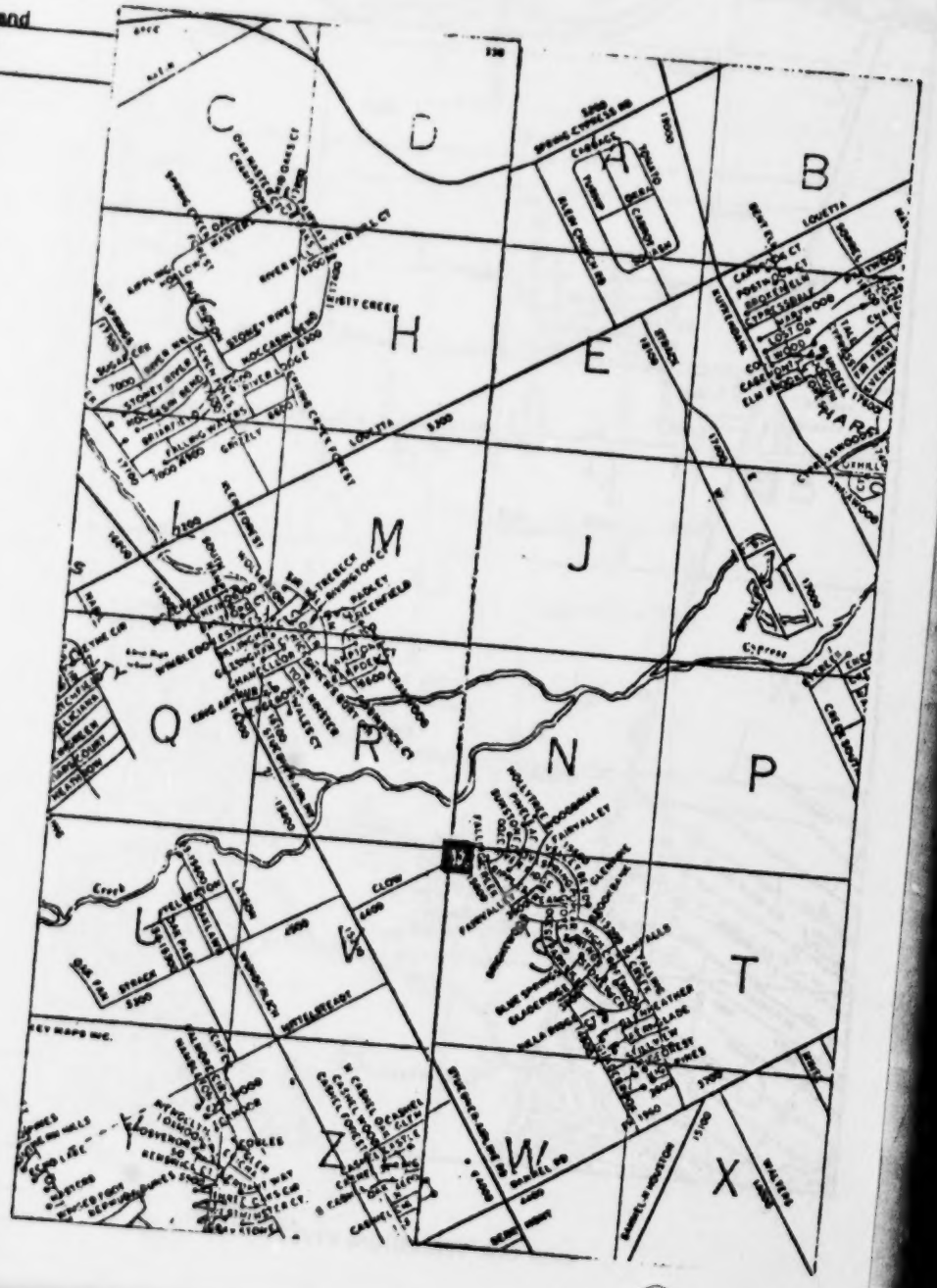
Life Expectancy Estimated 10 years

Relationship to Nearby Watercources Cypress Creek lies ½ mile due north, but drainage at the site is in a southerly direction.

Leachate Handling Techniques (Description & Evaluation) No leachate treatment facilities were in evidence. Leachate and runoff are pumped from work area holding pond into another holding pond. Compaction and coverage is almost on daily basis.

Comments (Site Adequacy Evaluation) Site appeared adequate for the type and quantity of waste being deposited. Final cover on 4 acres did not appear to be impermeable material. Site has Class II permit but only handles Class III wastes.

HARRIS LANDFILL MAP



Date February 17, 1976

Operator Gene B. Hazelwood

Surveyors Dick Cook
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Gene B. Hazelwood

Facility Address Ferry Road and Highway 146

Permit Type TSDH Permit # N/A

Type(s) of Waste II. Municipal* Quantity 21,600 yds^3/month

Site Area 22 acres Land Usage Rate/Yr. 3 acres/year

Land Remaining 22 acres

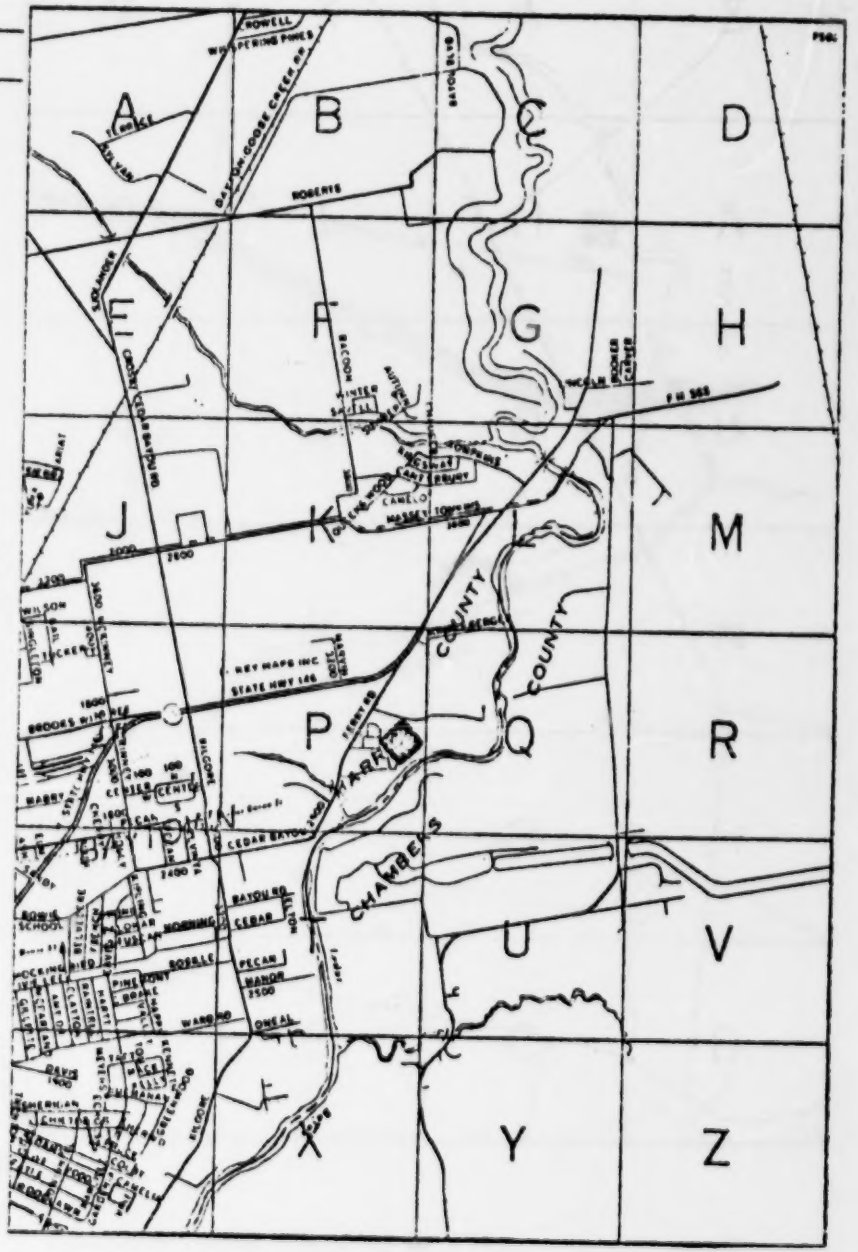
Life Expectancy 7 - 8 years

Relationship to Nearby Watercources Site is bordered at lower end by Cedar Bayou.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence. Holding pond situated to catch runoff from the ditches and trenches.

Comments (Site Adequacy Evaluation) *Site not yet in operation at survey visitation.

GENE B. HAZELWOOD MAP



Date March 11, 1976

Operator J. D. Giddings

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name J. D. Giddings/John M. Kilgore Co. (Formerly Sanitas Waste Disposal Site)

Facility Address 9500 Needlepoint Road (also known as Wallisville Road), Baytown

Permit Type TWQB Permit # 20031

Type(s) of Waste II. Miscellaneous, filter cake, some demolition, waste paper & municipal waste observed Quantity 2700 yds^3/month

Site Area 10 acres permitted of 67 acres total Land Usage Rate/Yr. 2 acres/year*

Land Remaining 8 acres under current permit 50 acres left of total 67

Life Expectancy 4 years*

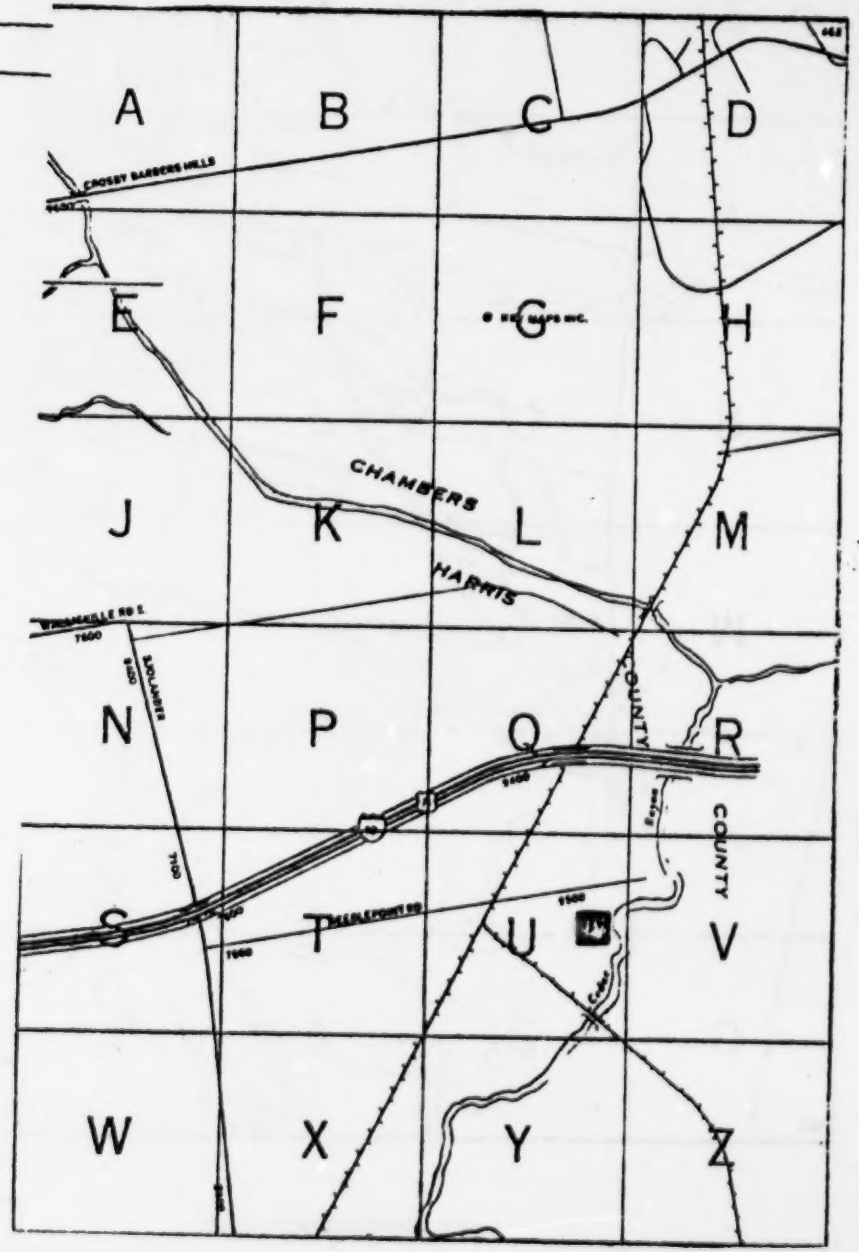
Relationship to Nearby Watercourses Cedar Bayou directly adjacent on the east.

Leachate Handling Techniques (Description & Evaluation) No leachate treatment in evidence. Intermittent discharge from two holding ponds enters Cedar Bayou through valve in levee. Runoff flows down a ditch on site's west side to ditch alongside Needlepoint/Wallisville Road to Cedar Bayou.

Comments (Site Adequacy Evaluation) Site appeared to be adequate in coping with the type and quantity of waste being disposed of.

*GCWDA Staff estimate.

J.D. GIDDINGS/JOHN M. KILGORE CO. MAP



Date March 10, 1976

Operator

Surveyors Bill Stullken
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Lewco Company (Probably now the Whitehead Company)

Facility Address 2536 Knoblock St. - On Clara Road one block north of Tanner Road

Permit Type TWQB Permit # 20022

NEW
Type(s) of Waste !!. Demolition waste Quantity

brush, plastic pipe, barrels.

OLD
Tin cans, etc.

Site Area 50 acres Land Usage Rate/Yr. Inactive

Land Remaining 50 acres

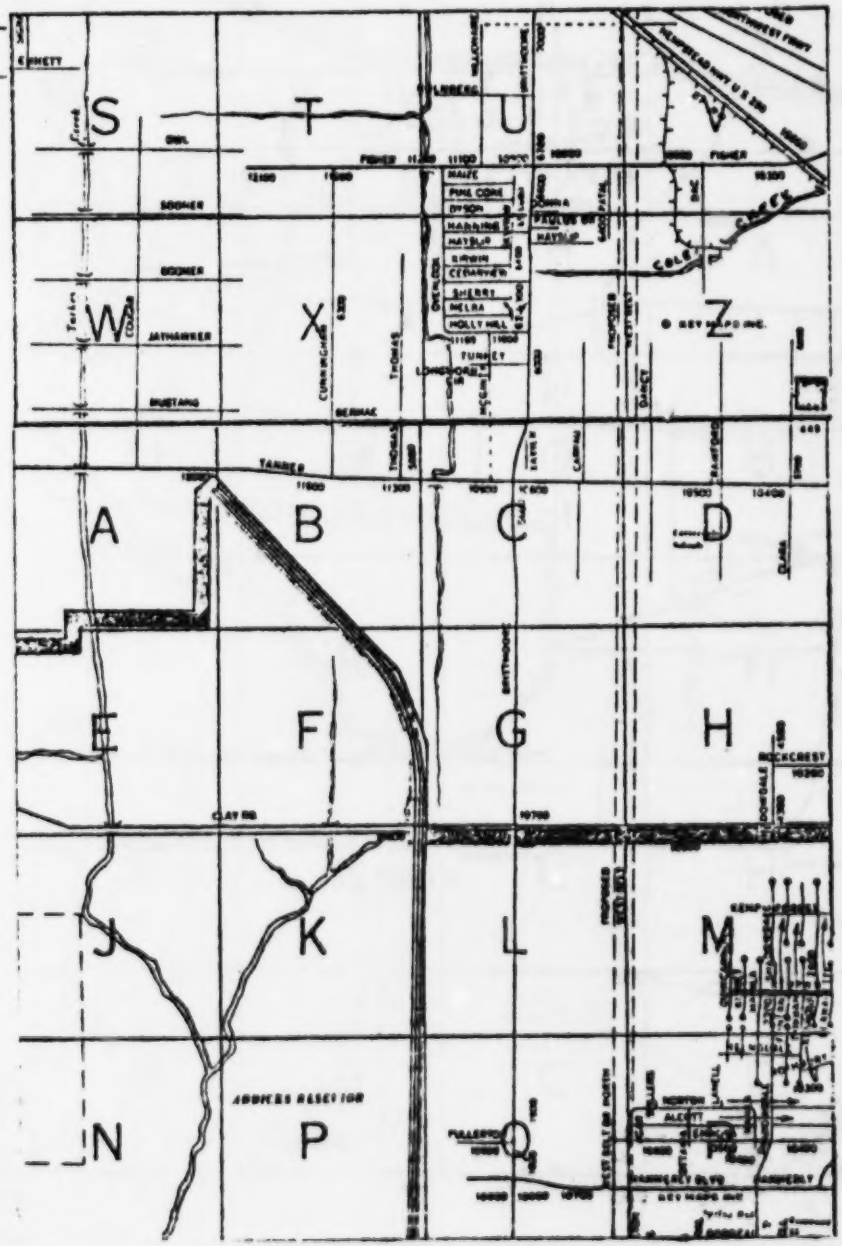
Life Expectancy N/A

Relationship to Nearby Watercources Upper branches of Cole Creek due north and east of the site within one mile radius.

Leachate Handling Techniques
(Description & Evaluation) No facilities evident.

Comments
(Site Adequacy Evaluation) Site appears to be inadequately maintained, with little cover on new operations.

LEWCO COMPANY MAP



Date _____

Operator _____

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Liberty Waste Disposal Company Phone: 424-5585

Facility Address Steele Road at Ellis School Road (P. O. Box 3370, Baytown, 77520

Permit Type TWQB Permit # 20106

Type(s) of Waste II. Paper, wood, plastics, Quantity 36,000 yds^3/month
metal, metal products,
industrial wastes

Site Area 40 acres Land Usage Rate/Yr. 10-11 acres/yr.

Land Remaining 25 acres

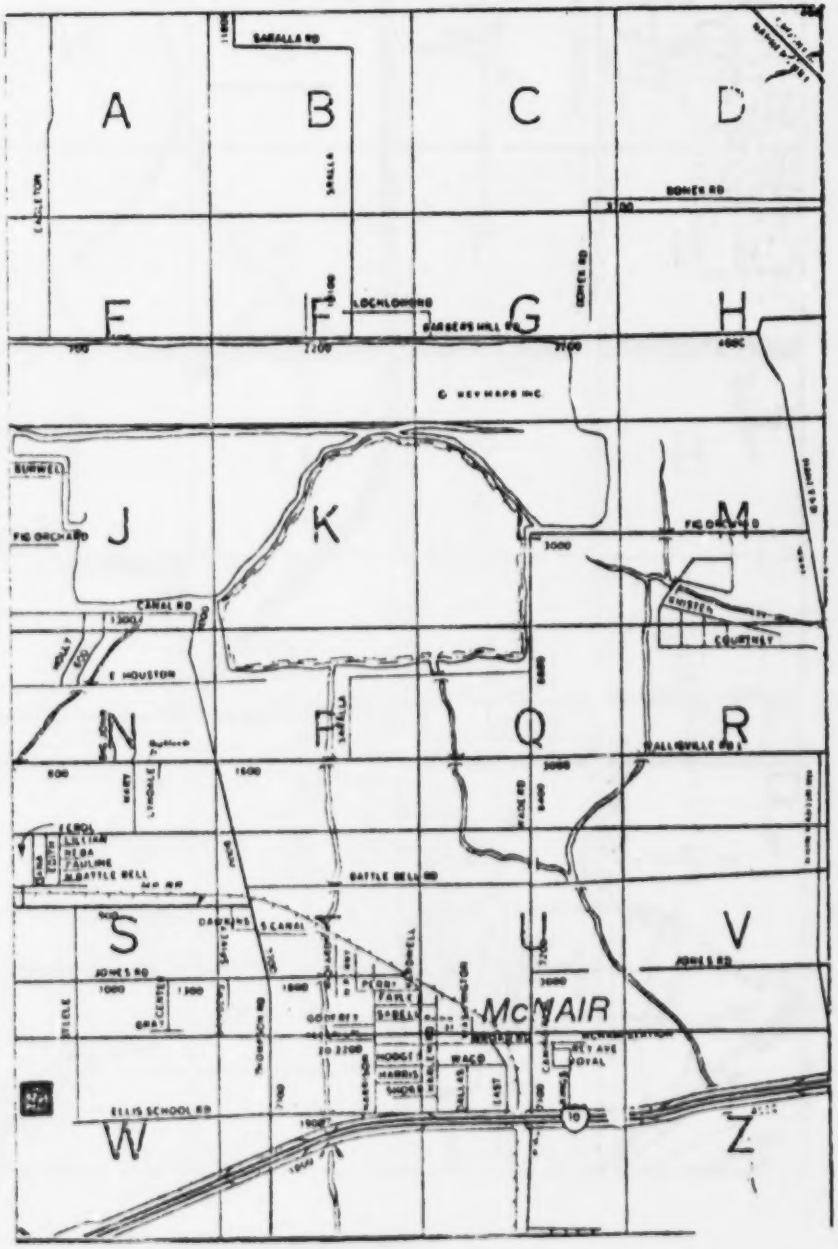
Life Expectancy 5 years

Relationship to Nearby Watercourses Trinity River fresh water canal within ¼ mile east of site, San Jacinto River within 1 mile due west

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence. Leachate and runoff dumped back on landfill and into "fish pond".

Comments (Site Adequacy Evaluation) Site appears to be adequately maintained; however, some heavy vapors were noticeable, possibly from Class I waste.

LIBERTY WASTE DISPOSAL CO. MAP



Date February 4, 1976

Operator Jack Livingston

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Livingston Construction Company, Inc.

Facility Address 12701 Bissonett

Permit Type TWQB Permit #

Type(s) of Waste H. Demolition and construction waste, paper, some oil and beer cans noted. Quantity 30,000 to 45,000 yds^3/mo.

Site Area 56 acres Land Usage Rate/Yr. 6 acres/year

Land Remaining 22 to 27 acres

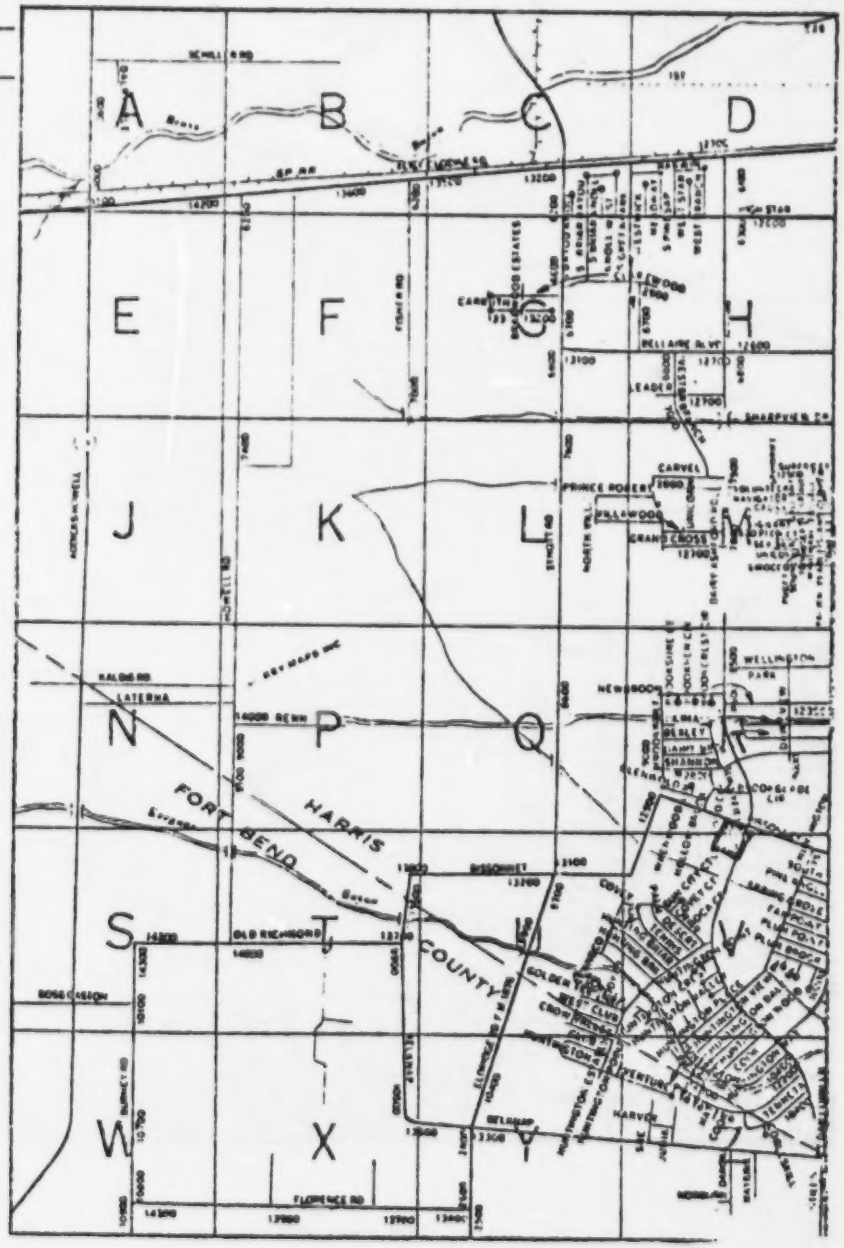
Life Expectancy 3½ to 4 years

Relationship to Nearby Watercourses Keegan's Bayou ½ mile to the southwest, with ditch leading from site directly into the bayou.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence. Large holding pond was being pumped continuously into the ditch leading to Keegan's Bayou.

Comments (Site Adequacy Evaluation) Site had good access road, security, wind fence, and coverage. Site appeared adequate.

LIVINGSTON CONSTRUCTION COMPANY, INC. MAP



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Date March 9, 1976

Operator

Surveyors Tom Samson
Bonnie Davis

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name James G. McDonald Phone: 695-0812

Facility Address 7500 Liberty Road , Houston 77028

Permit Type TWQB Permit # 20283

Type(s) of Waste II. Quantity

Site Area 22.81 acres Land Usage Rate/Yr. Inactive

Land Remaining 22.81 acres

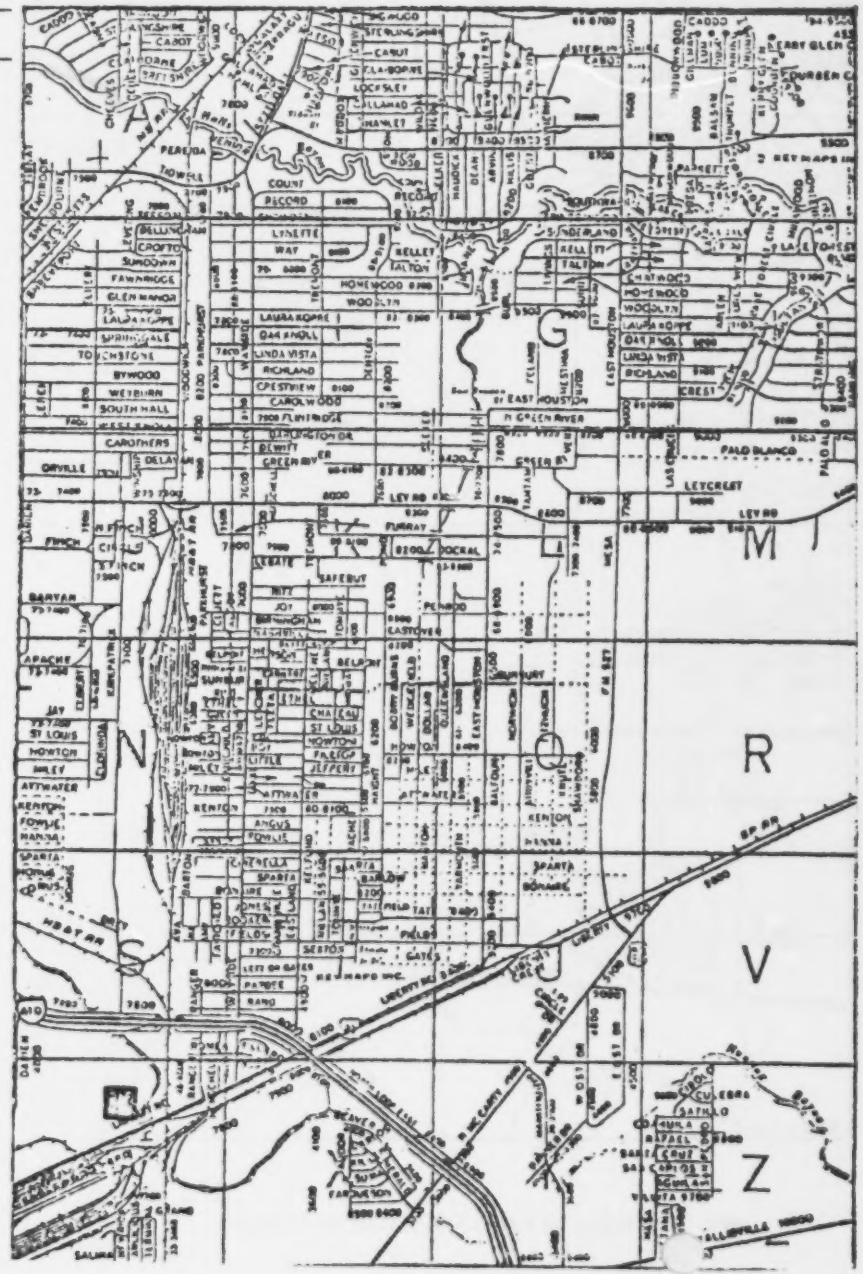
Life Expectancy

Relationship to Nearby Watercourses Drainage ditch along front and side. Hunting Bayou about 3/4 mile due east of the site.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities apparent. Holding pond for runoff.

Comments (Site Adequacy Evaluation) Site was inactive at time of visitation.

McDONALD DUMP MAP



Date March 2, 1976

Operator Doug Cooper, Jerry Neal

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Rollins Environmental Phone: 479-6001

Facility Address Tidal Road

Permit Type TWQB/NPDES Permit # 01429

Type(s) of Waste II. Sludge Quantity 8 tons/month

Site Area 8 to 10 acres Land Usage Rate/Yr. ½ acre/year

Land Remaining 35 acres

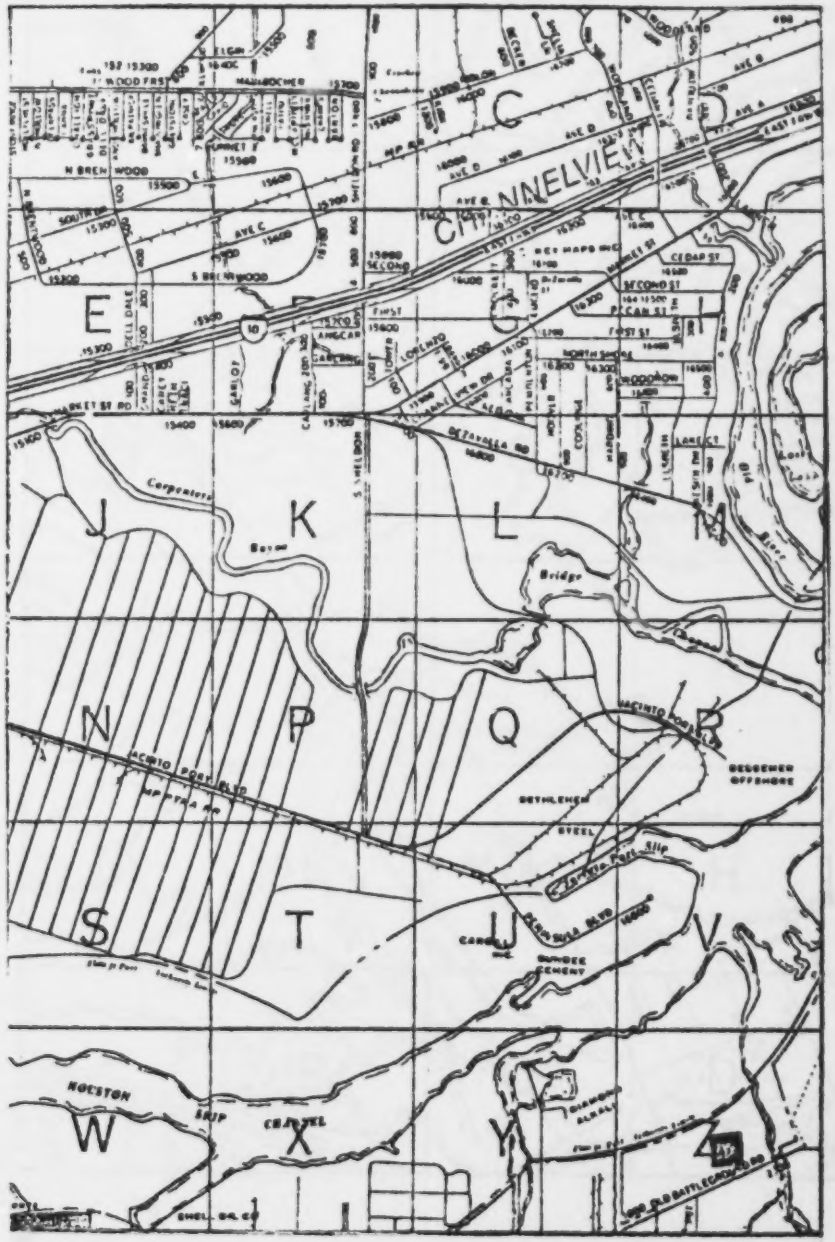
Life Expectancy 20 years

Relationship to Nearby Watercourses Site lies adjacent to Tucker's Bayou on the east, with Patrick Bayou 3/4 mile west, and HSC 3/4 mile north.

Leachate Handling Techniques (Description & Evaluation) This facility has clay lined pits where leachate is treated chemically and biologically.

Comments (Site Adequacy Evaluation) Facilities are presently undergoing a major expansion. The present facilities appear to be well run and adequate to handle the waste material that is processed.

ROLLINS ENVIRONMENTAL MAP



Date April 5, 1976

Operator

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Southwestern Barge Fleet Service

Facility Address 18300 Market Street Road at San Jacinto River, Channelview

Permit Type None Permit #

Type(s) of Waste Demolition waste, paper, some municipal Quantity

Site Area 10-15 acres Land Usage Rate/Yr.

Land Remaining None

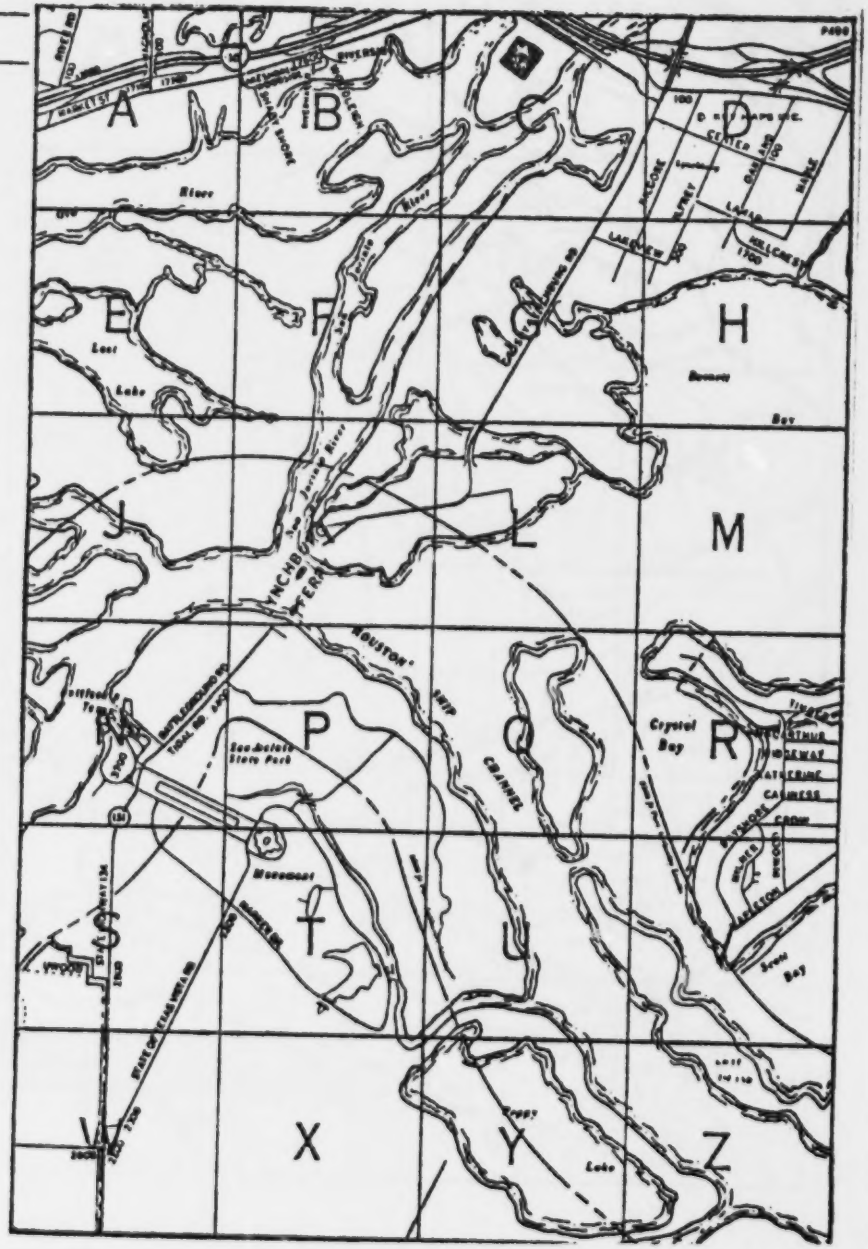
Life Expectancy None

Relationship to Nearby Watercourses Immediately adjacent to San Jacinto River on the east and Old River on the west.

Leachate Handling Techniques
(Description & Evaluation) None

Comments
(Site Adequacy Evaluation) Site was uncovered and totally inadequate regarding health and pollution. Operated illegally until closed down in the last week of March, 1976

SOUTHWESTERN BARGE FLEET SERVICE MAP



Date February 5, 1976

Operator

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Tex-Haul, Inc. Phone: 631-3642

Facility Address 7200 Tidwell Houston 77016

Permit Type TWQB Permit # 20277

Type(s) of Waste II. Quantity Inactive

Site Area 10 acres Land Usage Rate/Yr.

Land Remaining None

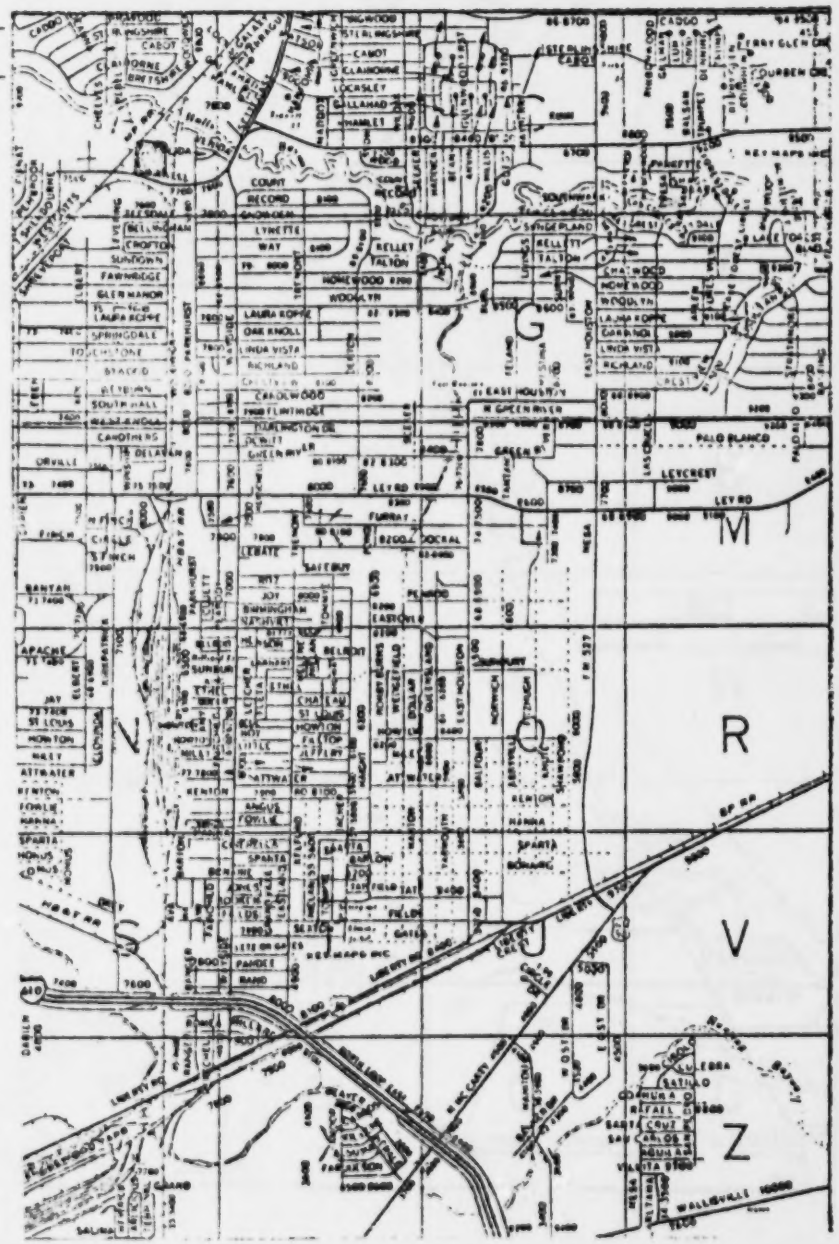
Life Expectancy None

Relationship to Nearby Watercources Hall's Bayou immediately adjacent to the site's north side, with RR ditches connecting site and bayou.

Leachate Handling Techniques (Description & Evaluation) None.

Comments (Site Adequacy Evaluation) Site completely full and shut down. Some waste had been deposited at the entrance since the operation ceased.

TEX-HAUL, INC. MAP



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Date February 9, 1976

Operator

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Walker's Sand Pit

Facility Address Bayport Blvd. & East Repsdorph

Permit Type N/A Permit # N/A

Type(s) of Waste Demolition waste and paper Quantity Inactive

Site Area 50 acres Land Usage Rate/Yr. N/A

Land Remaining 50 acres

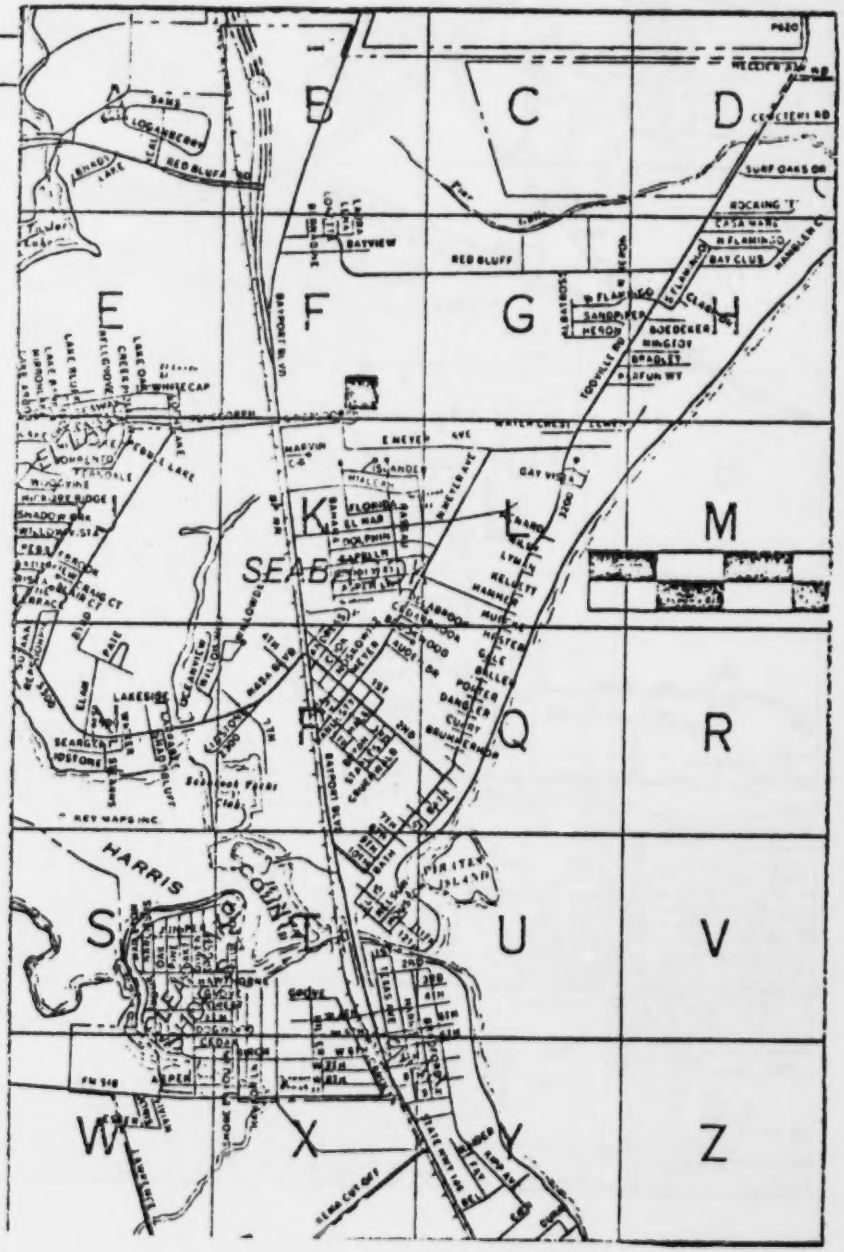
Life Expectancy N/A

Relationship to Nearby Watercources Galveston Bay 1 mile due southeast.
Unnamed creek emptying into Clear Lake ¼ mile southwest.

Leachate Handling Techniques
(Description & Evaluation) None

Comments
(Site Adequacy Evaluation) Site currently not being used as solid waste disposal site, but has been in recent past as much uncovered debris was in evidence.

WALKER'S SAND PIT MAP



Date March 11, 1976

Operator Firm Attny. - Ron Haddox

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Waste Products, Inc.

Facility Address 1209 Decker Drive/Suite 206, Baytown
F.M. 1942 at Garth Road (Site Address) Phone: 424-4511

Permit Type TWQB Permit # 20525

Type(s) of Waste II. Quantity

Site Area 215 acres of 500 total Land Usage Rate/Yr.

Land Remaining

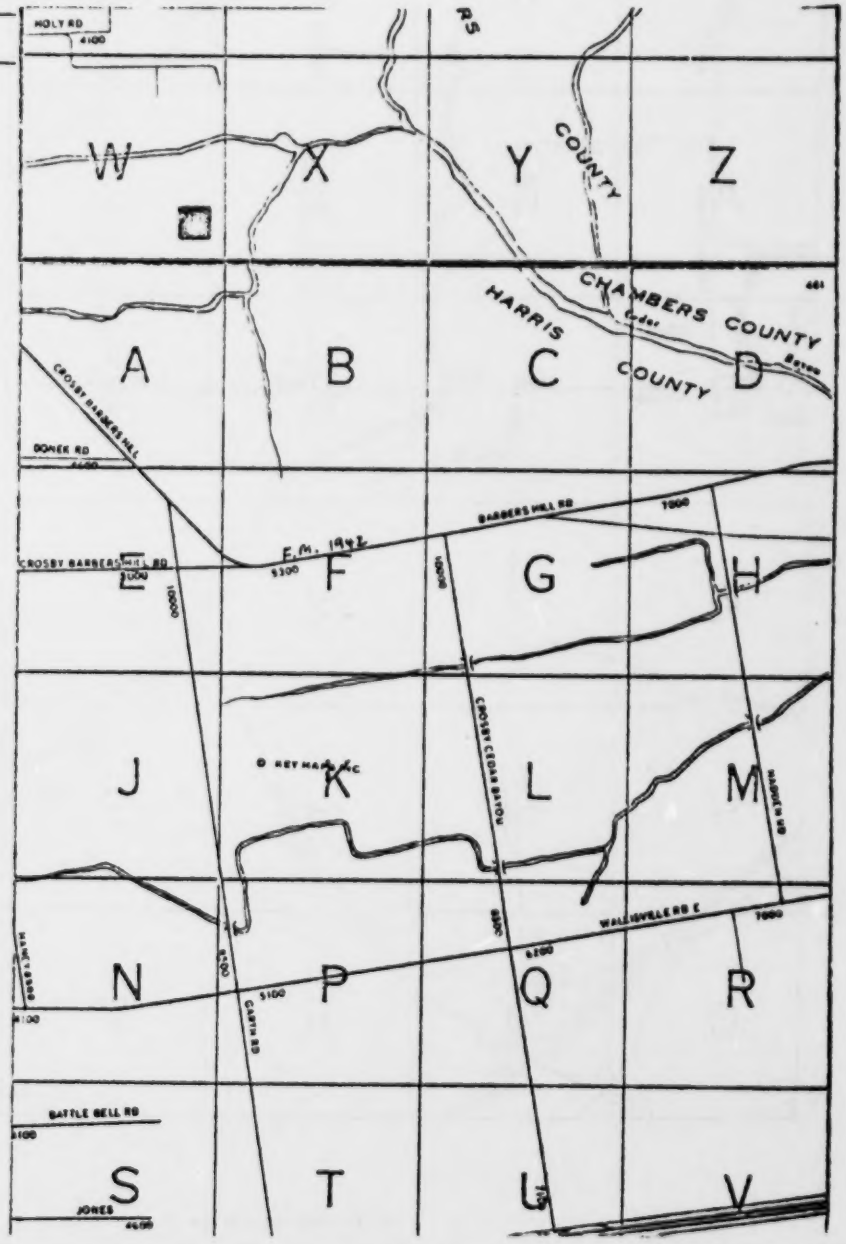
Life Expectancy Site inactive

Relationship to Nearby Watercourses Unnamed creek runs through site and joins Cedar Bayou within 1 mile to the northeast.

Leachate Handling Techniques
(Description & Evaluation) N/A

Comments
(Site Adequacy Evaluation) Site inactive pending permit approval - currently a rice farm adjacent to and west of Cedar Bayou, approximately one mile north of Crosby-Barbers Hill Road.

WASTE PRODUCTS, INC. MAP



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Date February 3, 1976

Operator G. O. Weiss

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name G. O. Weiss, Inc.

Facility Address 5547 Addicks - Satsuma Road

Permit Type Harris County Permit # 32

Type(s) of Waste II. General refuse, wood, tires, paper, metal Quantity 39,000 yds^3/month

Site Area 97 acres Land Usage Rate/Yr. 10 acres/year

Land Remaining 50 acres

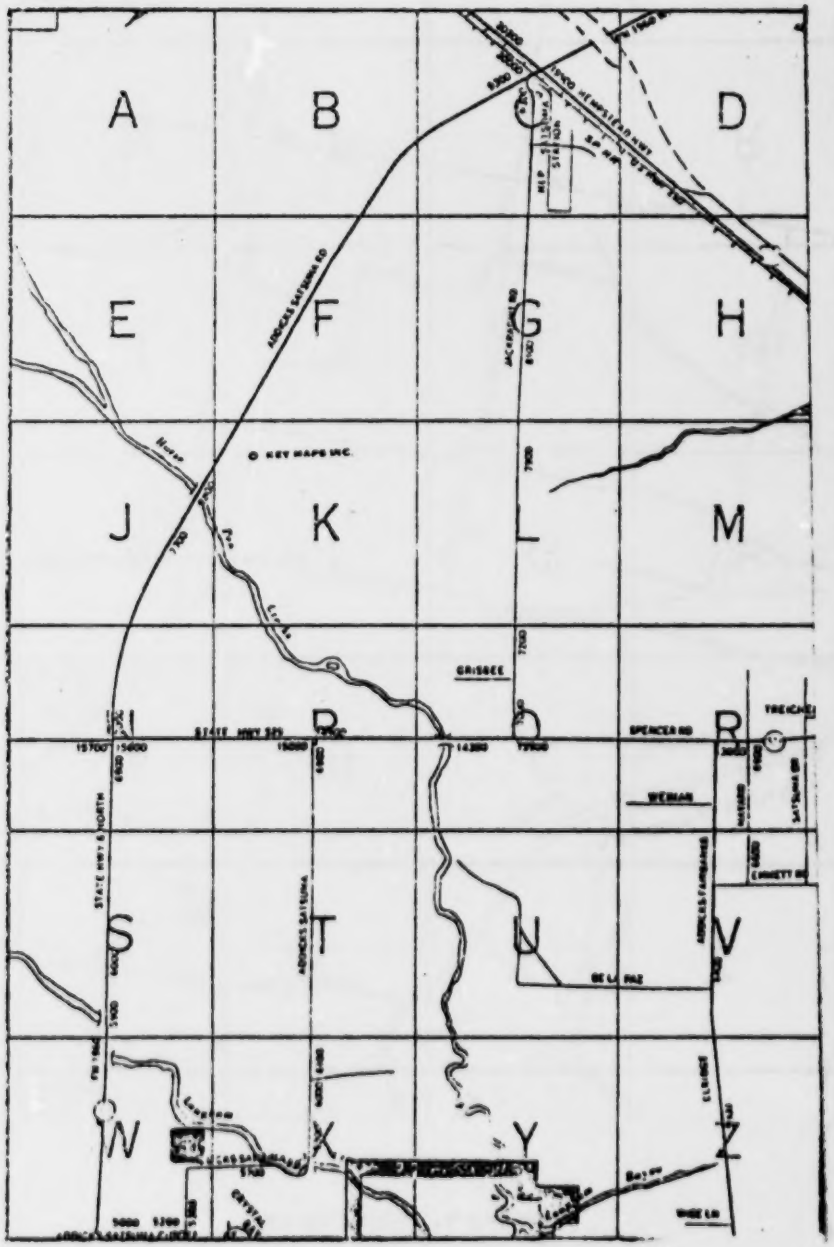
Life Expectancy 4 - 5 years

Relationship to Nearby Watercources No leachate facilities in evidence. Several holding ponds in evidence to catch and hold runoff, which is thereafter pumped into Langham Creek.

Leachate Handling Techniques
(Description & Evaluation) No leachate facilities in evidence. Several holding ponds in evidence to catch and hold runoff, which is thereafter pumped into Langham Creek.

Comments
(Site Adequacy Evaluation) Access and security were good, though a wind fence had blown partially over in sections. The covering operation of the site was adequate although some municipal waste was noted.

G. O. WEISS, INC. MAP



Date February 1976

Operator Dick Jones

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Western Land Reclamation (Western Refuse Company)

Facility Address 12712 Church Box 1681 Pasadena, 77501 (Phone: 455-4903)

Permit Type TWQB Permit # 20439

Type(s) of Waste Class II. Industrial Waste Quantity Est. 40,000 yds^3/month
construction, some drums
some municipal garbage noted.

Site Area 23.8 acres Land Usage Rate/Yr. 1½ acres/year

Land Remaining 10 acres

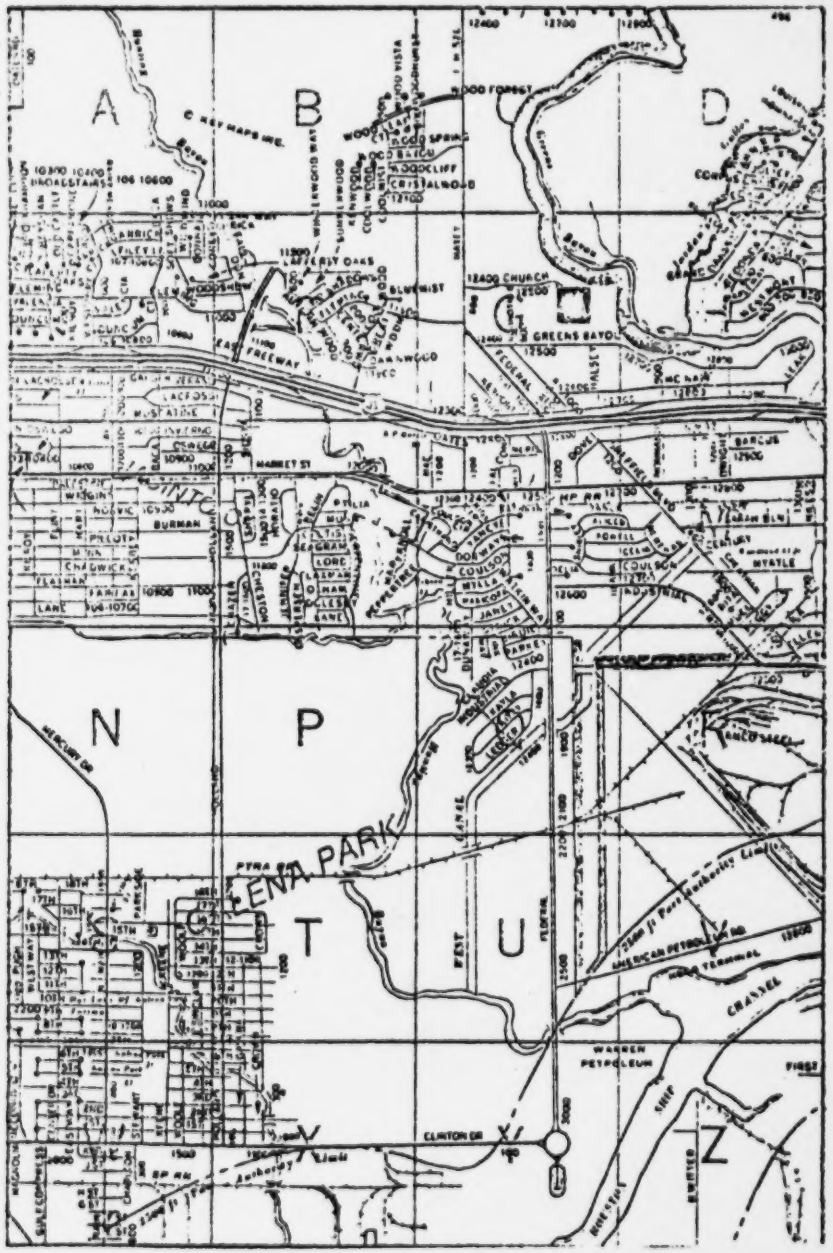
Life Expectancy 5 years

Relationship to Nearby Watercources Site is next to Green's Bayou.

Leachate Handling Techniques
(Description & Evaluation) No leachate collection or treatment systems were in evidence. Runoff from the site was trapped by a levee then pumped to 2 holding ponds, then out of the site. Runoff entered the site directly from an Armco Steel slurry dump of considerable size.

Comments
(Site Adequacy Evaluation) One section had burned sometime previous to our visit. An old layer of trash was being removed to obtain sand for sale. Site appeared adequate with good access and a controlled entrance; however some water quality problems could be caused during heavy rainfall.

WESTERN REFUSE COMPANY MAP



MUNICIPAL OPERATIONS

Site Investigation Forms

Date February 9, 1976

Operator Mr. Strike

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Baytown, City of

Facility Address McLean Road - off Wade Road

Permit Type TSDH Permit # N/A

Type(s) of Waste 1. Sanitary landfill. Quantity 3600 yds^3/week
municipal, demolition, brush
sludge once weekly.

Site Area 50 Acres Land Usage Rate/Yr. 5 to 7 acres/year

Land Remaining 5 acres

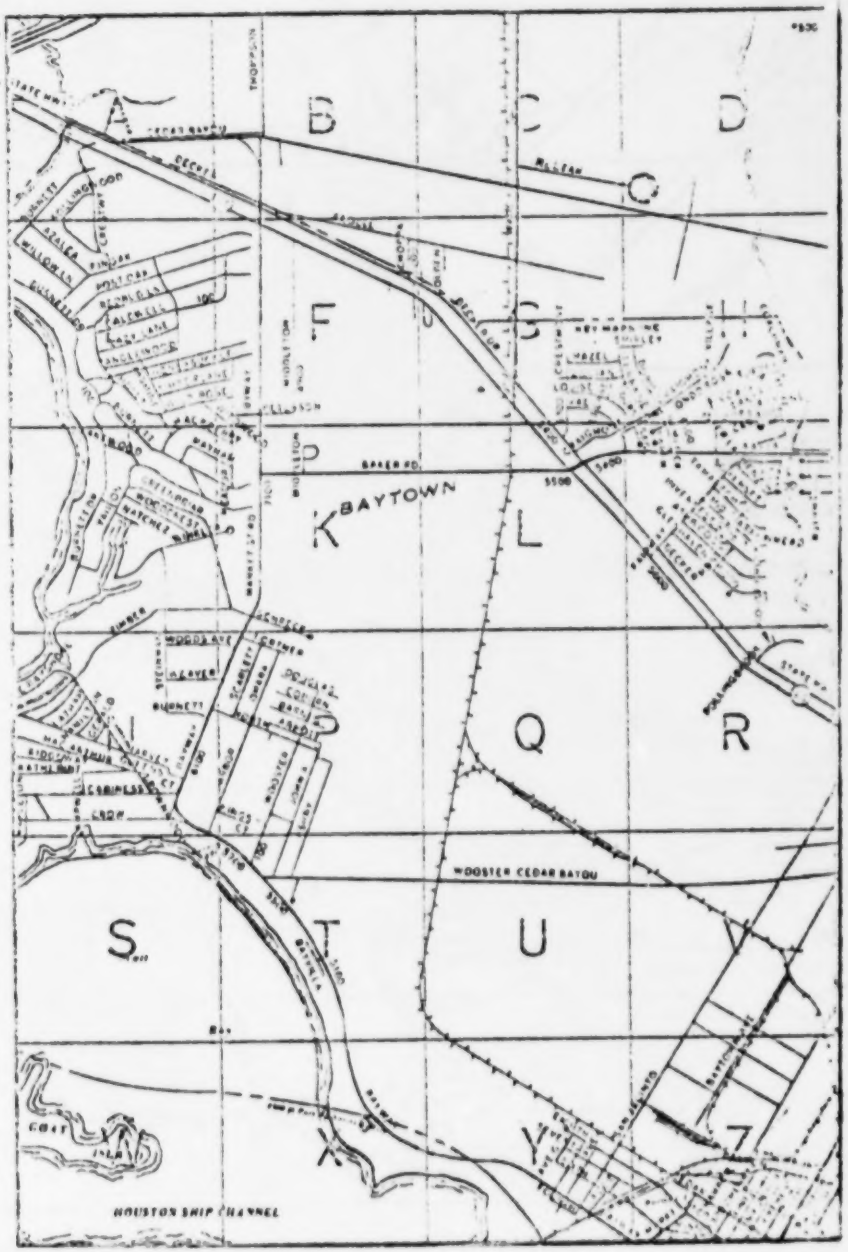
Life Expectancy 6 to 8 months

Relationship to Nearby Watercourses Goose Creek immediately adjacent to the site on the east.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence. Levee between the site and Goose Creek serving as barrier to runoff is low at one point. Water chlorinated prior to being pumped into Goose Creek.

Comments (Site Adequacy Evaluation) Site was inadequate in that compaction of wastes was improperly managed and cover material was inadequate. Access road was in fair condition and gate security good.

CITY OF BAYTOWN MAP



Date February 4, 1976

Operator Troy Snow & Mr. Foster

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Bellaire, City of

Facility Address 9720 Ruffino Road

Permit Type TWQB Permit #

Type(s) of Waste 1. Municipal Quantity 6,000 yds^3/month

brush, demolition, construction

wastes, sludge

Site Area 75 acres Land Usage Rate/Yr. 1½ acres/year

Land Remaining 7 to 8 acres

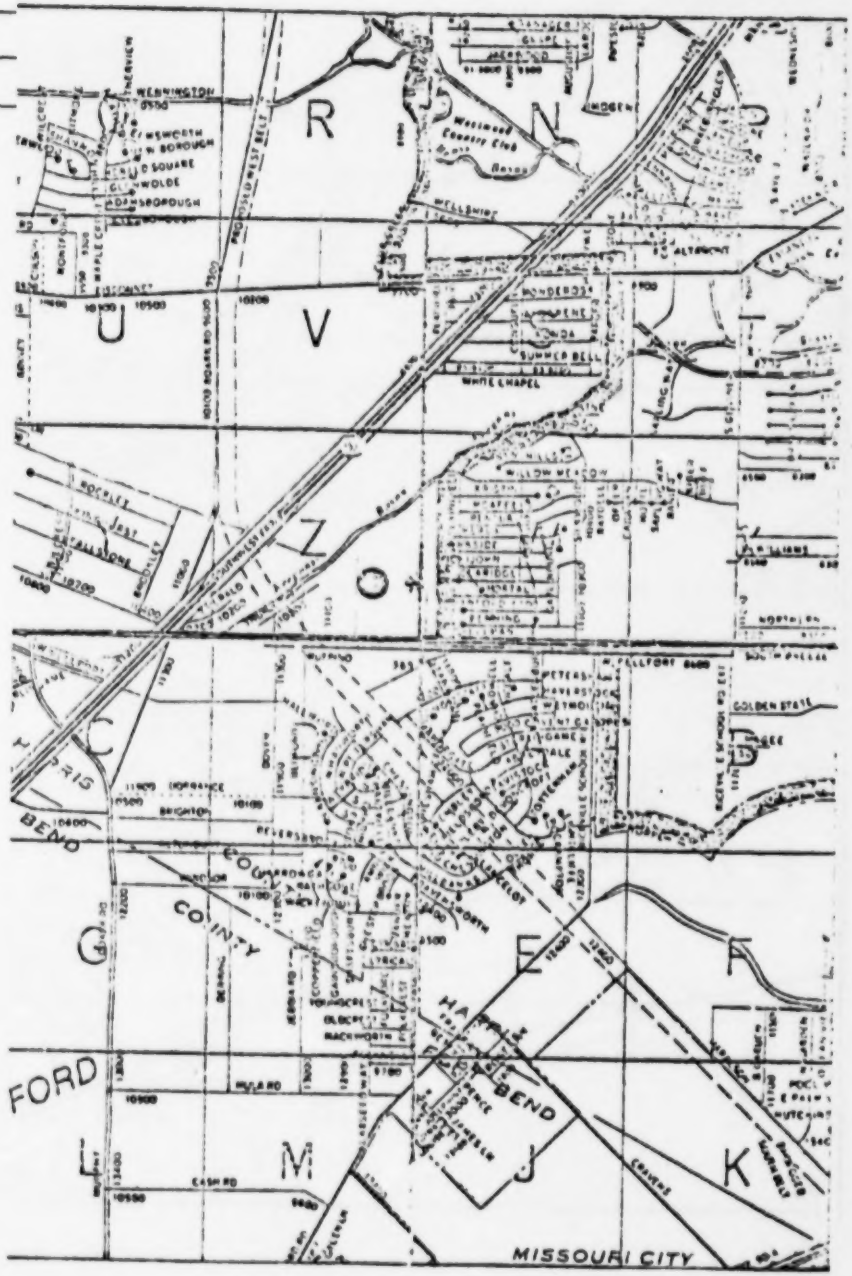
Life Expectancy 3½ to 4 years

Relationship to Nearby Watercources Keegan's Bayou immediately adjacent to the site on the northwest.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence. Runoff collected by means of the trench operation, then pumped out into Keegan's Bayou.

Comments (Site Adequacy Evaluation) The best municipal site observed. Completely adequate for the amount and type of waste being disposed of.

CITY OF BELLAIRE MAP



Date February 11, 1976

Operator Mr. Simmons

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Galena Park, City of Phone: 453-8726

Facility Address 701 19th Street, Galena Park

Permit Type TSDH Permit # N/A

Type(s) of Waste Municipal waste Quantity 2,400 yds^3/month

brush and construction

waste

Site Area 25 acres Land Usage Rate/Yr. 3 to 4 acres/year

Land Remaining 15 to 20 acres

Life Expectancy 5 to 6 years

Relationship to Nearby Watercourses Hunting Bayou forms the eastern boundary of the site, with a ditch cutting through the site to join the bayou.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities were in evidence. Runoff flowed from the ditch to the bayou thence into HSC

Comments (Site Adequacy Evaluation) A marginal to poor operation only partly covered. Incinerated wastes were in a separate section, as was concrete wastes. Some municipal garbage not incinerated during incinerator downtime was poorly covered.

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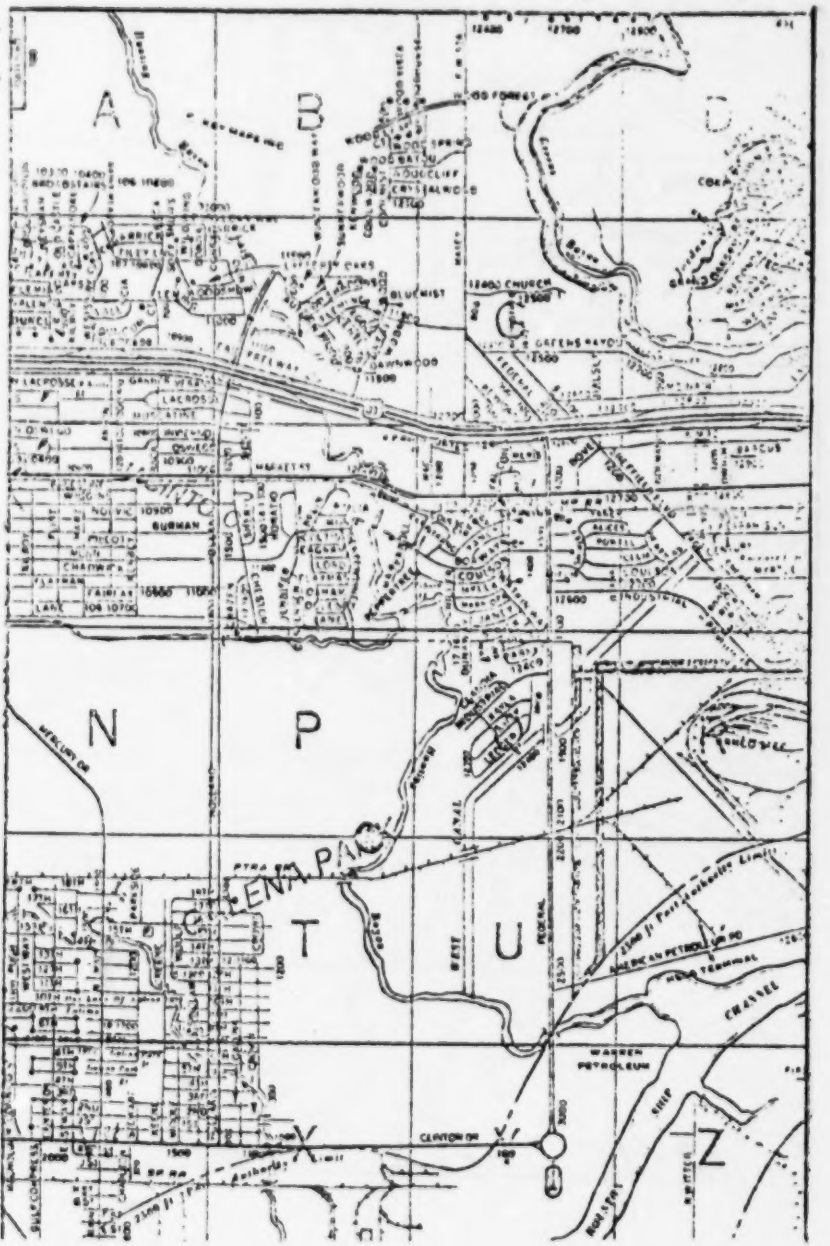
CITY OF GALENA PARK MAP



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Date February 4, 1976

Operator Mr. Doss, County Eng.

Surveyors Dick Cook
Bill Stullken

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Harris County Site #3

Facility Address Broadway Street, La Porte

Permit Type Harris County Permit # 15

Type(s) of Waste Municipal Quantity 15,000 yds^3/month

Commercial

Site Area 34 acres Land Usage Rate/Yr. Not given.

Land Remaining 8 acres

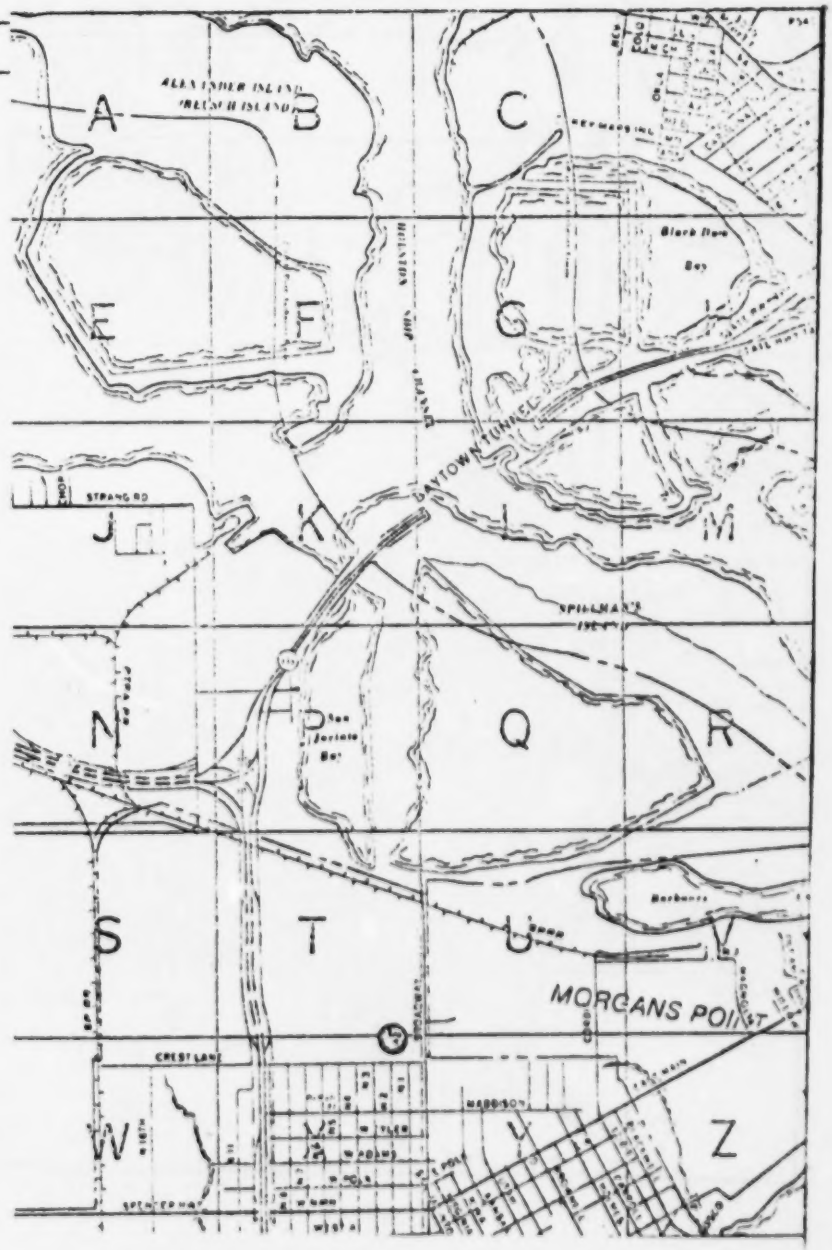
Life Expectancy 1 year

Relationship to Nearby Watercourses One mile southwest of the HSC, approximately 1 mile west of Galveston Bay.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence. From a holding pond, runoff flows through a barrow ditch to the HSC.

Comments (Site Adequacy Evaluation) Site appeared adequate for the projected remaining time of site operation.

HARRIS COUNTY SITE #3 MAP



Date February 11, 1976

Operator

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Jacinto City, City of

Facility Address 703 19th Street, Galena Park

Permit Type TWQB Permit #

Type(s) of Waste Municipal garbage* and miscellaneous Quantity 960 yds^3/month

Site Area 20 acres Land Usage Rate/Yr. Unknown

Land Remaining 1 acre

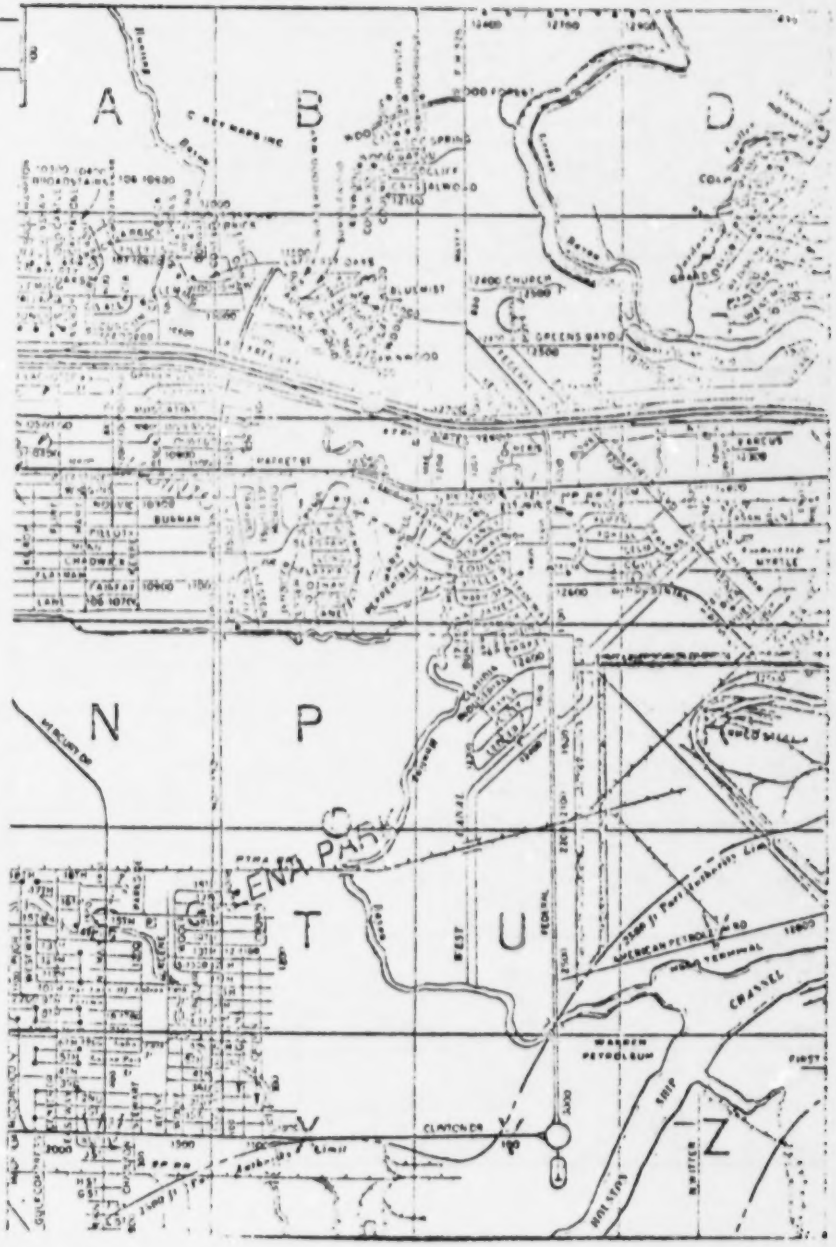
Life Expectancy Site should be closed.

Relationship to Nearby Watercources Hunting Bayou lies ¼ mile southeast of the site. Ditch cuts across the Galena Park site from the Jacinto City site to connect with Hunting Bayou.

Leachate Handling Techniques (Description & Evaluation) No leachate treatment or facilities were in evidence. Leachate was escaping down the ditch from the site to the bayou, as would runoff. Runoff also would flow in several directions to connect with Hunting Bayou and thence into the Houston Ship Channel.

Comments (Site Adequacy Evaluation) *Virtually totally uncovered over the entire site and in some areas uncompacted. Polluted leachate clearly visible. An open dump, in reality.

CITY OF JACINTO CITY MAP



Date February 17, 1976

Operator Betty Murray

Surveyors Dick Cook
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Katy, City of

Facility Address F.M. 2855 - 9 miles north N. 95°55' W 29°55'

Permit Type _____ Permit # _____

Type(s) of Waste I. Municipal Quantity 500 yds^3/ month

Site Area 21 acres Land Usage Rate/Yr. 1 acre/year but increasing

Land Remaining 16 to 17 acres

Life Expectancy 10 years

Relationship to Nearby Watercourses Ditch surrounds entire site and connects to drainage ditch along F.M. 2855. Live Oak creek is 1 mile north and connects with Cypress Creek 2 miles east of the site.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence. Trench operation prevents much runoff from entering work area, as most flows into the surrounding ditch and thence to the drainage ditch along F.M. 2855.

Comments (Site Adequacy Evaluation) Good security system. Site has wind fence inside the security fence. Site appears adequate.

CITY OF KATY MAP

Date February 4, 1976.

Operator Mr. Jones, Mr. Henry

Surveyors Dick Cook
Bill Stulken

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Pasadena, City of

Facility Address Southwest of the Burke Road - Crenshaw Road intersection

Permit Type TSDH Permit # 109

Type(s) of Waste 1. Municipal garbage Quantity 36,000 yds^3/month
Trasn

Site Area 89 acres Land Usage Rate/Yr. Area fill

Land Remaining 89 acres

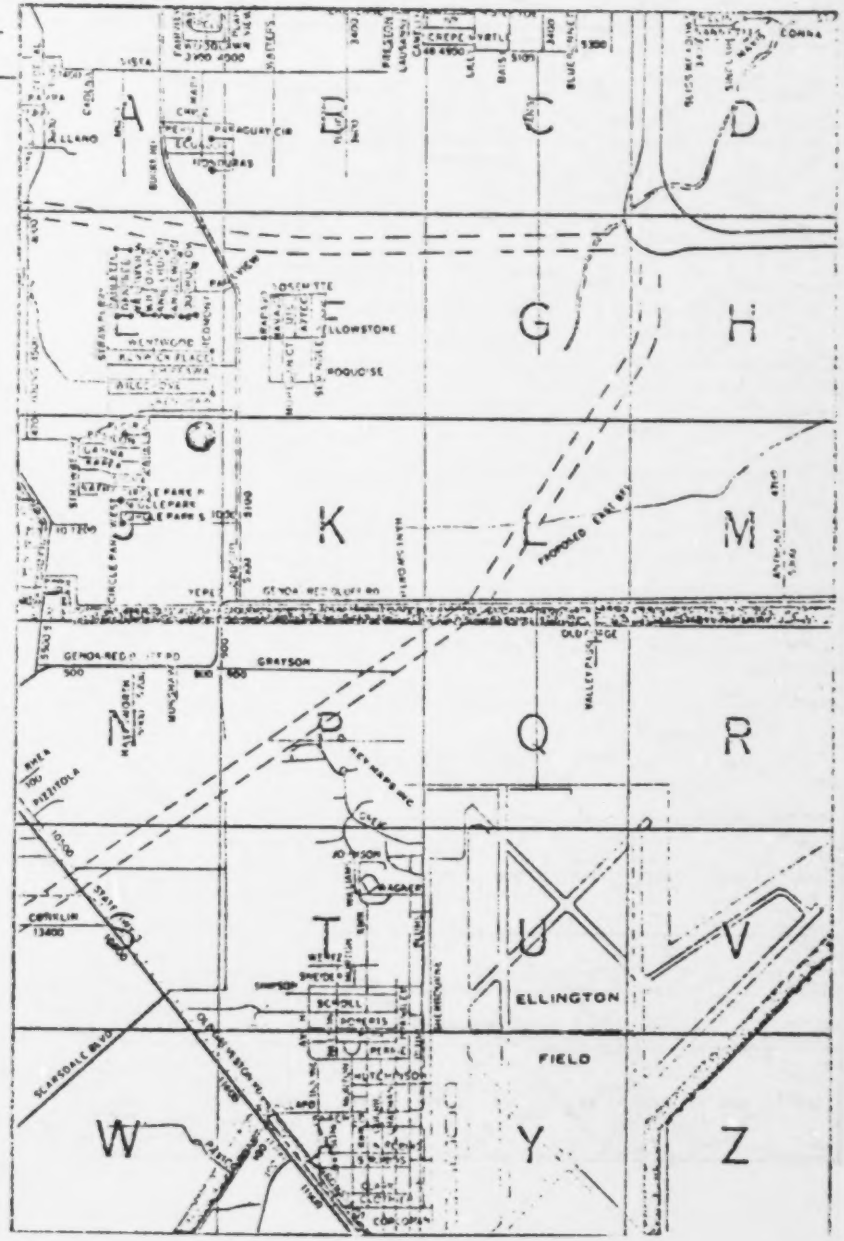
Life Expectancy 3 years if permit approved

Relationship to Nearby Watercources Unnamed branch of Little Vince Bayou lies 3/4 mile east, and Vince Bayou originates ¼ mile due north of the site.

Leachate Handling Techniques (Description & Evaluation) Leachate setties then pumped to wastewater treatment plant where it is chlorinated prior to release into Crenshaw Ditch and Little Vince Bayou.

Comments (Site Adequacy Evaluation) Site appeared adequate.

CITY OF PASADENA MAP



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Date February 17, 1976

Operator C.A. Wood, H.A. Perkins

Surveyors Dick Cook and Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Prairie View A & M College (Waller Co.)

Facility Address Immediately north of campus N 30°06' W 95°59.5'

Permit Type Waller Co. Health Department Permit # N/A

Type(s) of Waste 1. Sanitary landfill-municipal Quantity N/A

construction & demolition

waste, some old cars noted.

Site Area 5 acres Land Usage Rate/Yr. 2.5 acres/year

Land Remaining 5 acres

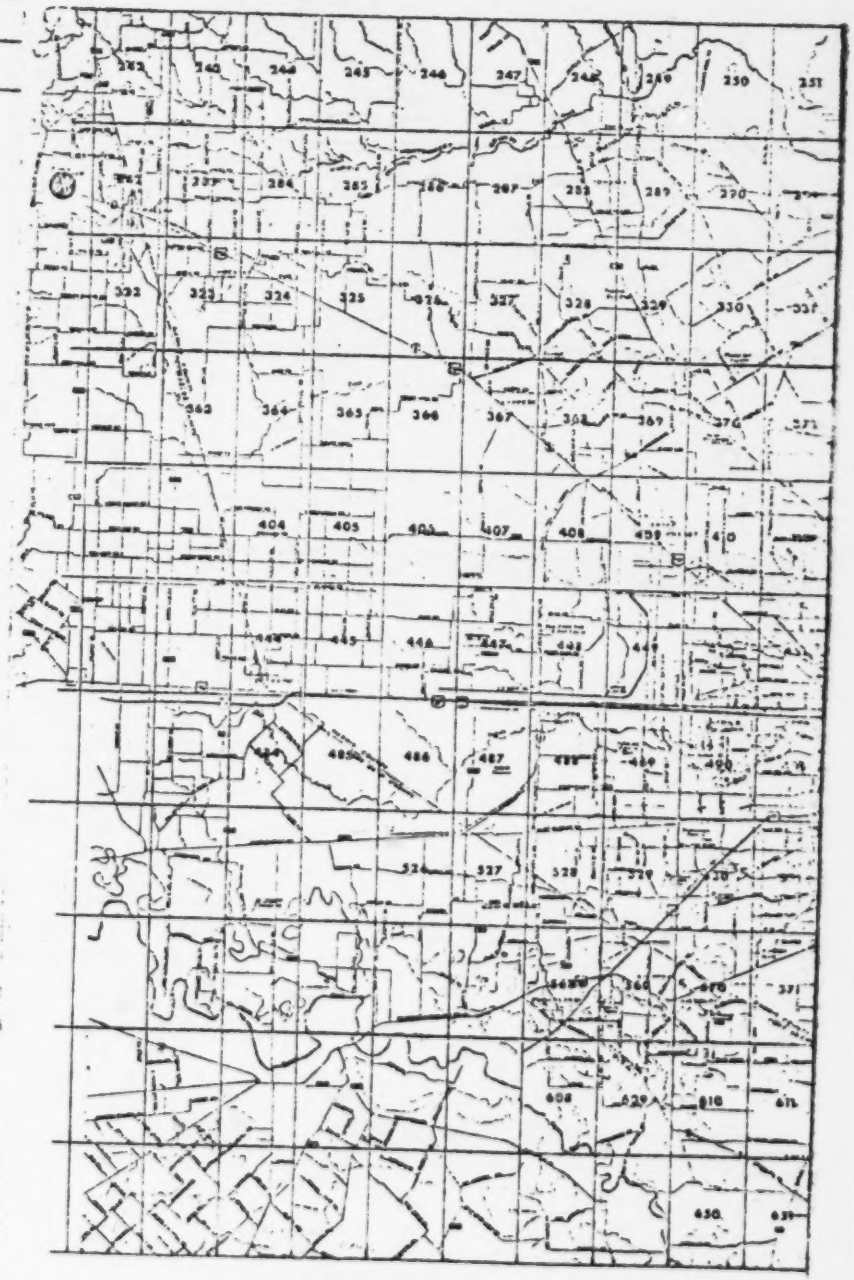
Life Expectancy 2 years

Relationship to Nearby Watercources Gully forming eastern boundary connects to Spring Creek ½ mile to east. Mound Creek lies ½ mile to the west and south and connects with Cypress Creek 1½ miles south of the site.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence. No runoff controls or holding ponds in use that were ooservable.

Comments (Site Adequacy Evaluation) Site had disorganized work face with no coverage anywhere; burning was taking place; wire had tangled the buildozer tracks; gate was open and unattended; road was adequate only halfway into the site. In sum, the site was inadequate.

PRAIRIE VIEW A & M COLLEGE MAP



Date February 4, 1976

Operator Mr. Gregg

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name West University Place, City of

Facility Address 9610 Ruffino Road

Permit Type Harris County Permit # _____

Type(s) of Waste II. Municipal garbage Quantity 230 yds^3/month

_____ _____

_____ _____

Site Area 73 acres Land Usage Rate/Yr. 1 acre/year

Land Remaining 25-27 acres

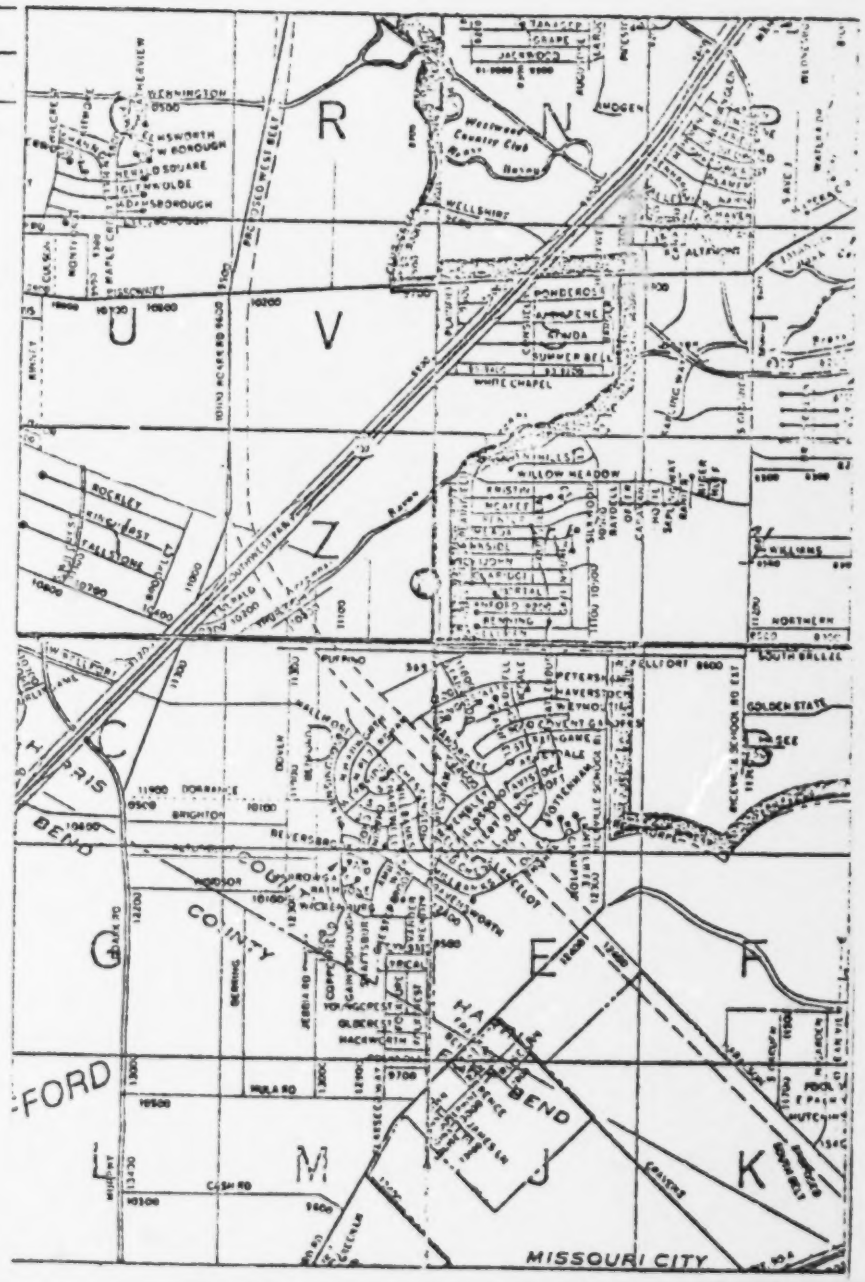
Life Expectancy 6 to 7 years

Relationship to Nearby Watercources Keegan's Bayou borders the site on the northwest.

Leachate Handling Techniques
(Description & Evaluation) No leachate facilities in evidence. Runoff collects in the trenches, and from trenches is pumped into Keegan's Bayou.

Comments
(Site Adequacy Evaluation) Site appeared adequate for the type and quantity of wastes being deposited. Clay lining, coverage, and the access road were all fair to good, although the gate was open and unmarked.

CITY OF WEST UNIVERSITY PLACE MAP



INDUSTRIAL OPERATIONS

Site Investigation Forms

Date March 2, 1976

Operator Mr. Culbreth

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name American Smelting - Federated Metal

Facility Address 9200 Market Street

Permit Type TWQB Permit # 20262

Type(s) of Waste _____ Quantity _____

_____ _____

_____ _____

Site Area _____ Land Usage Rate/Yr. _____

Land Remaining _____

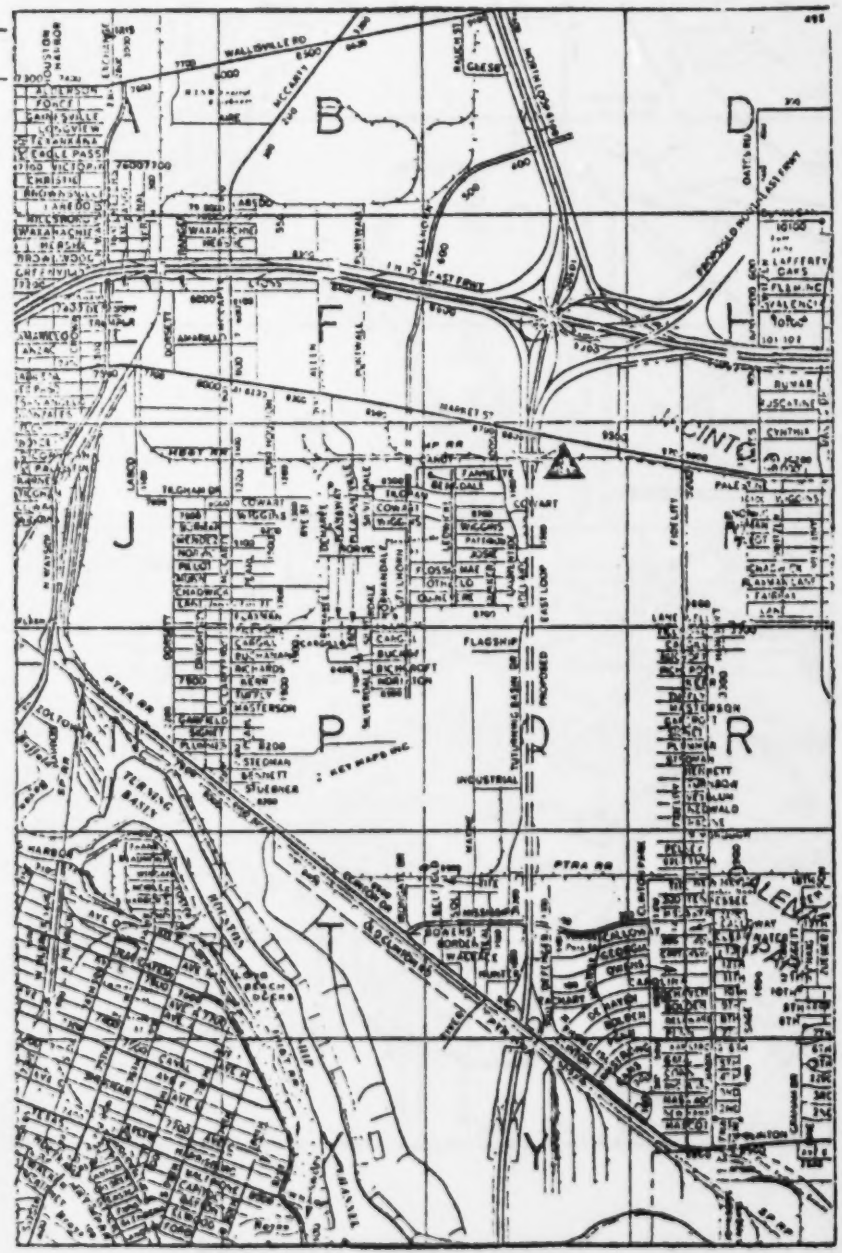
Life Expectancy Inactive

Relationship to Nearby Watercourses Houston Ship Channel 2 miles southwest, Hunting Bayou 2½ miles east.

Leachate Handling Techniques
(Description & Evaluation) N/A

Comments
(Site Adequacy Evaluation) N/A - Site inactive.

AMERICAN SMELTING-FEDERATED METAL MAP



Date March 3, 1976

Operator Mr. Mayo & Mr. Jackson

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Armco Steel Corporation Phone: 453-7211

Facility Address 12,600 Greens Bayou, Houston

Permit Type TWQB Permit # 20101

Type(s) of Waste Filter cake from air pollution scrubbers Quantity 2250 tons/month

Site Area 9.47 acres Land Usage Rate/Yr. N/A

Land Remaining 9.47 acres

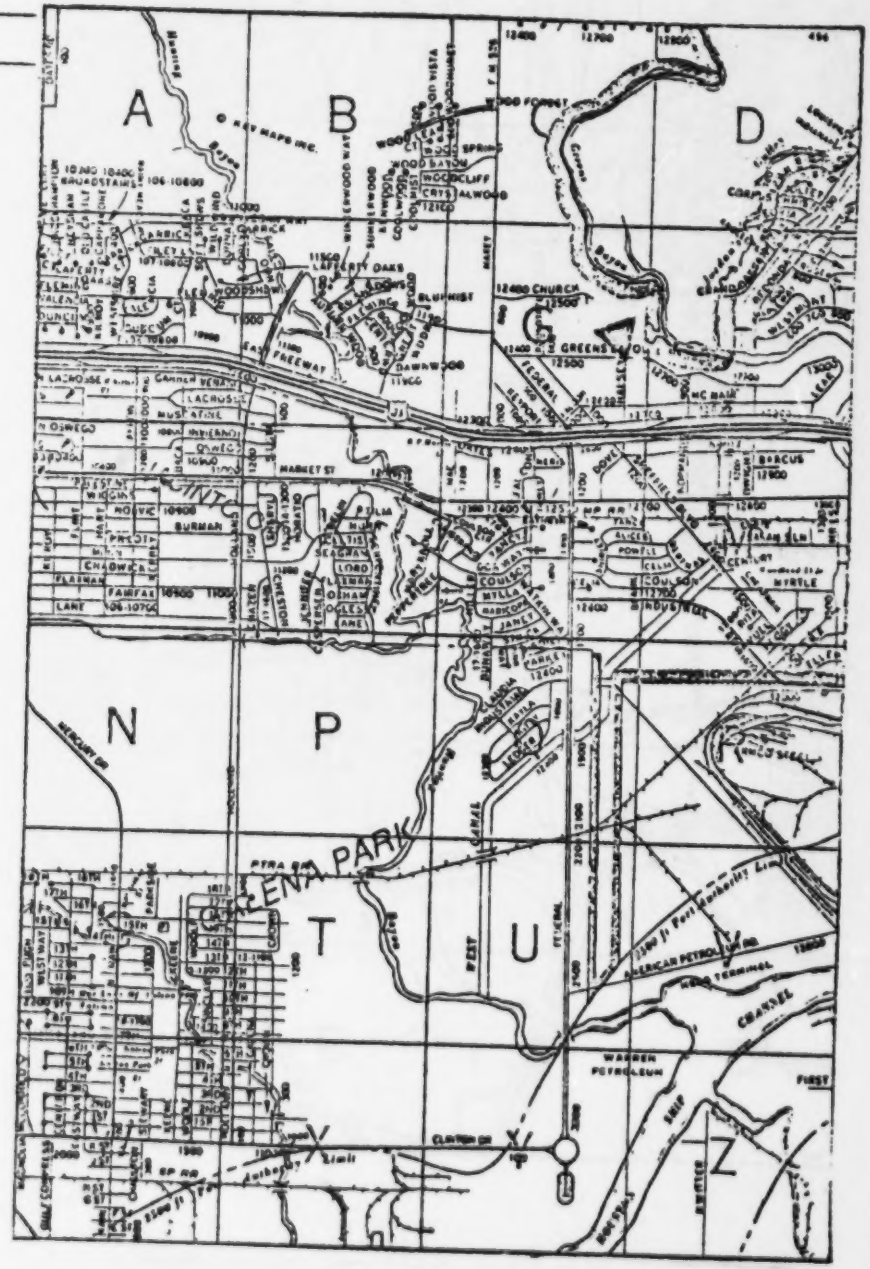
Life Expectancy 10 years

Relationship to Nearby Watercourses 1/4 mile from Greens Bayou

Leachate Handling Techniques
(Description & Evaluation) None

Comments
(Site Adequacy Evaluation) This facility handles inert Class III material and appears to be adequate for the type of operation taking place.

ARMCO STEEL CORPORATION MAP



Date March 1, 1976

Operator G. L. Porter

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Ashland Chemical

Facility Address North and Ashby, Baytown

Permit Type TWQB Permit # 20378

Type(s) of Waste Rubber waste Quantity 450-5,460 yds^3/month

Site Area 3-4 acres (lagoons) Land Usage Rate/Yr. N/A

Land Remaining 3-4 acres

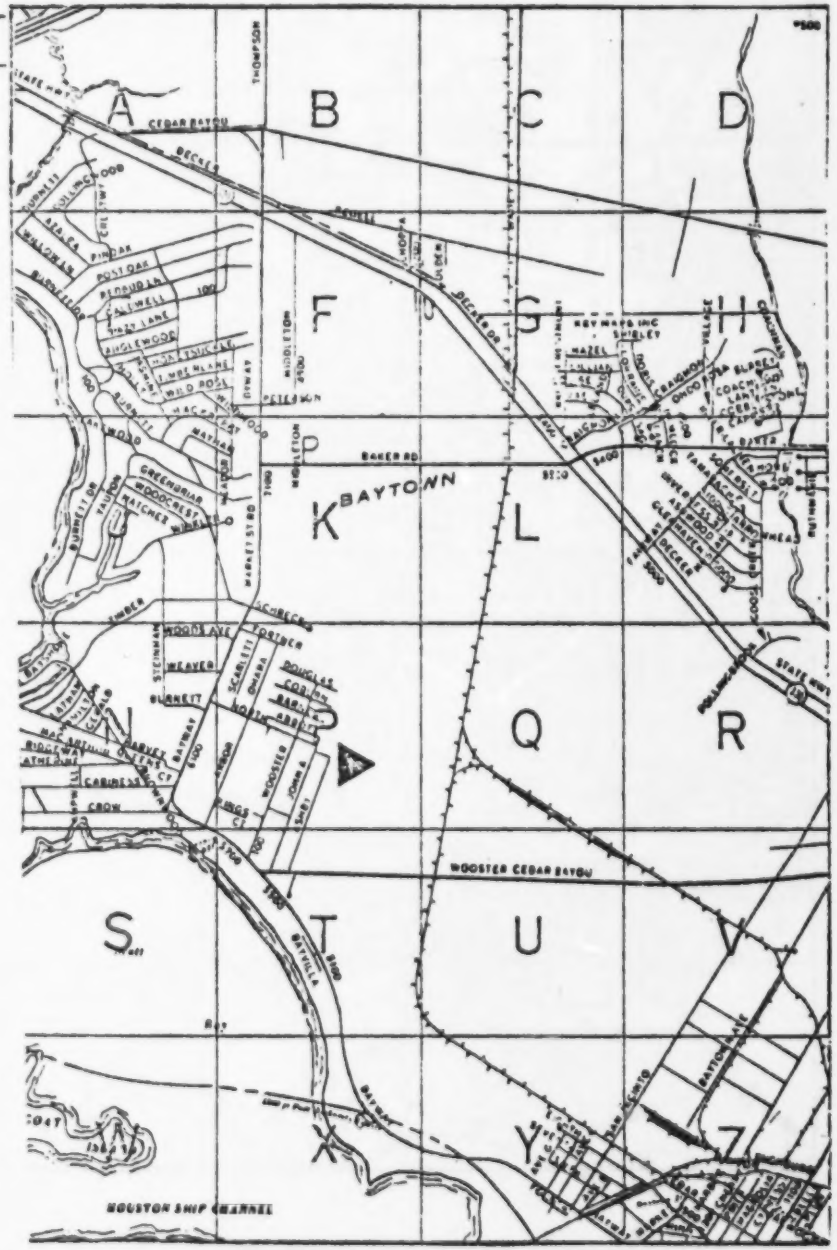
Life Expectancy 15+ years

Relationship to Nearby Watercources Scott Bay and HSC directly southwest approximately one-half mile.

Leachate Handling Techniques (Description & Evaluation) Normal lagoon process for the five lagoons in use. Rainwater and runoff pumped into the plant treatment facility.

Comments (Site Adequacy Evaluation) Site appeared adequately maintained.

ASHLAND CHEMICAL MAP



Date March 2, 1976

Operator Alex Shaw

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Atlantic Richfield Phone: 475-4509

Facility Address 12000 Lawndale

Permit Type TWQB Permit # 20372

Type(s) of Waste Oily sludges, lead contaminated sludge perlite, zeolite, anthracite coal, filter clays Quantity 16.44 tons/month

Site Area 40-50 acres Land Usage Rate/Yr. N/A

Land Remaining 40-50 acres

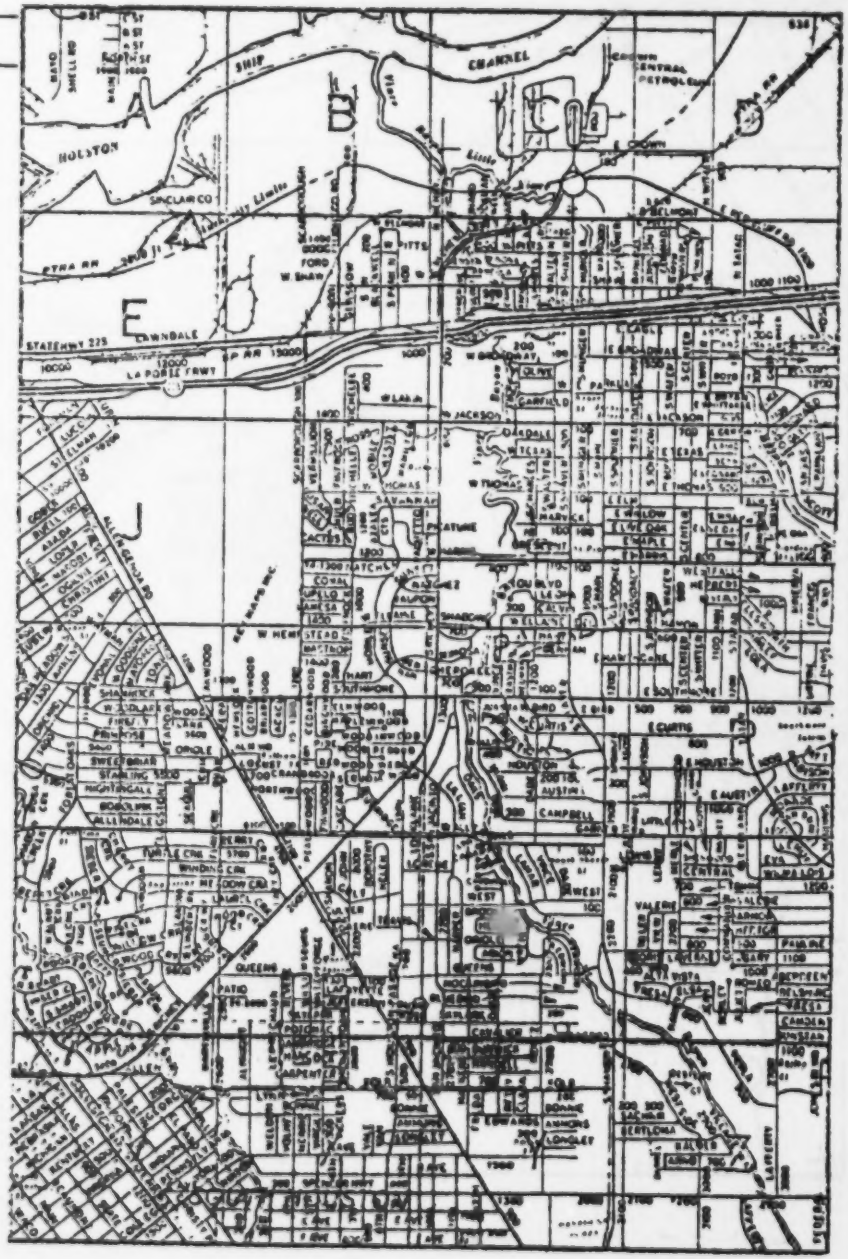
Life Expectancy Indefinite - landfarming operation

Relationship to Nearby Watercources 1/2 mile east of Sims Bayou, 1/2 mile south of HSC.

Leachate Handling Techniques (Description & Evaluation) None.

Comments (Site Adequacy Evaluation) The landfarming technique employed by Atlantic Richfield is run in an efficient manner and provides an excellent means of solid waste management.

ATLANTIC-RICHFIELD MAP



Date April 8, 1976

Operator S. C. Itin

Surveyors Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Cameron Iron Works, Inc.

Facility Address 22301 U.S. Hwy. 290 Phone: 683-1012

Permit Type None Permit #

Type(s) of Waste Furnace dust (with Cr, Ni, Mn, Mo, V, Cu, Al, Ca, Zn) wastewater sludge

Quantity 30 tons/month; 10 yds^3/month

Site Area 1.2 acres Land Usage Rate/Yr. 0.1 acre/year

Land Remaining 0.6 acres

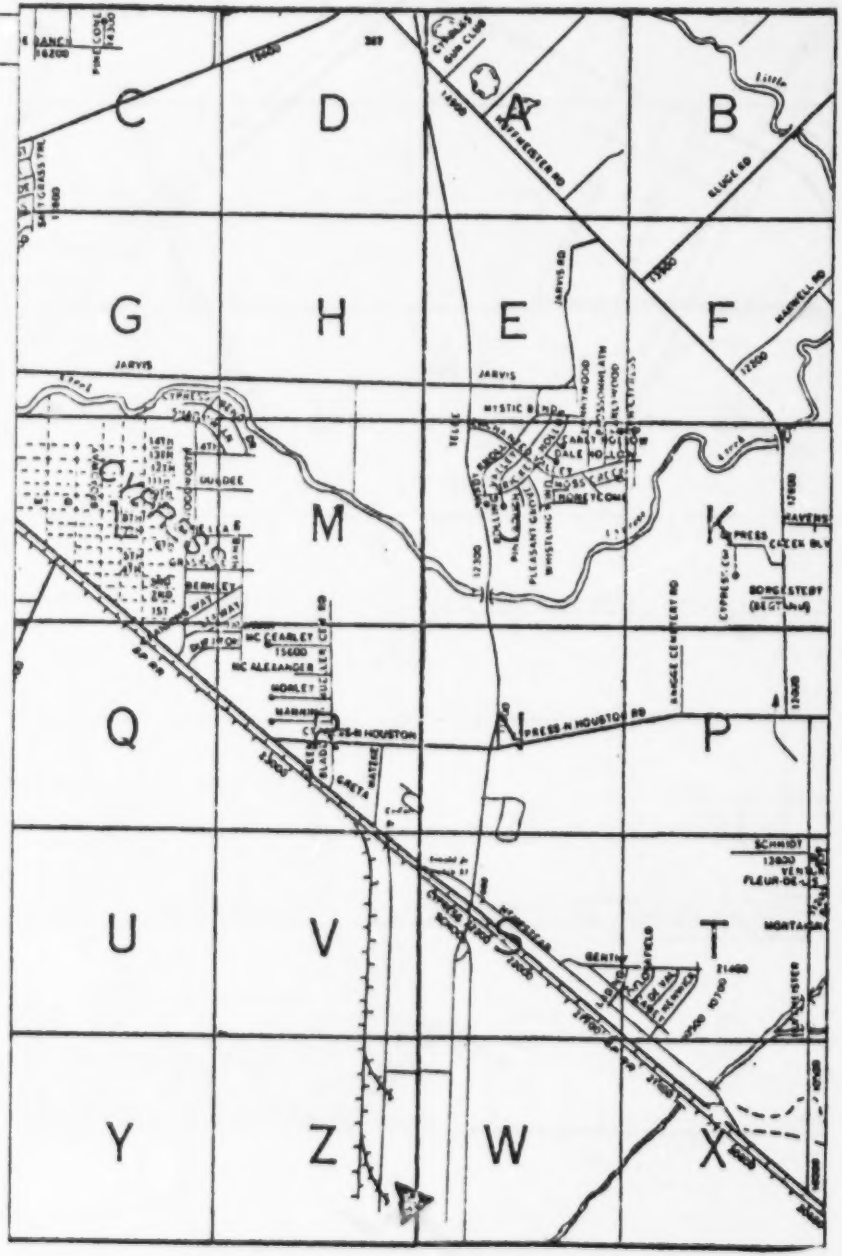
Life Expectancy 5 years

Relationship to Nearby Watercourses Cypress Creek due north 1 mile, White Oak Bayou 1 mile southeast.

Leachate Handling Techniques (Description & Evaluation) Monitor well to check groundwater was installed to monitor leachate.

Comments (Site Adequacy Evaluation) Surface runoff flows into settling pond. Site will close in approximately one month as Cameron Iron has decided to have commercial haulers dispose of their wastes.

CAMERON IRON WORKS, INC. MAP



Date February 26, 1976

Operator Clifford R. De Rose

Surveyors Tom Samson

Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Celanese Chemical Company

Facility Address 9502 Bayport Blvd. (Clear Lake) Phone: 474-2801

Permit Type TWOB Permit # 20492

Type(s) of Waste Water, oil, organic residues Quantity 135,000 gals/month

wastewater & organic residues 3,300,000 gals/month

contaminated dirt 5 yds^3/month

CIWA water silt 140 tons/month

Site Area 100' x 100'* Land Usage Rate/Yr. N/A

Land Remaining 100' x 100'

Life Expectancy Indefinite

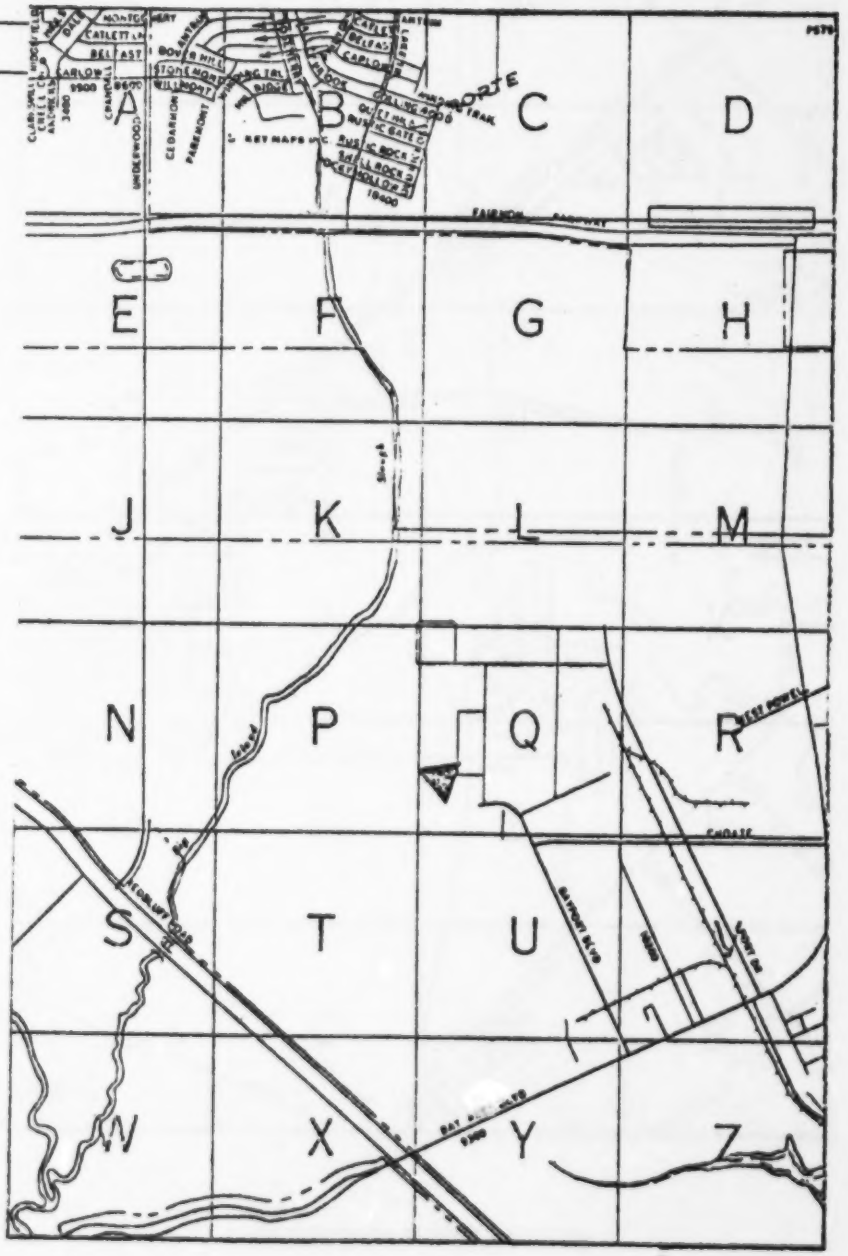
Relationship to Nearby Watercourses Close to Big Island Slough.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities per se. Raised area surrounds two storage tanks, incinerator, backup incinerator and entire site. Storage pond for contaminated runoff until treated in plant process.

Comments (Site Adequacy Evaluation) Very good arrangement and maintenance. Site appeared adequate.

*.2 acre site prepared for CIWA sludge drying beds in near future.

CELANESE CHEMICAL COMPANY MAP



Date April 7, 1976

Operator Glenn Jones

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Challenge Machine Works, Inc.

Facility Address 6460 Aldine-Bender Road, Humble Phone: 441-3115

Permit Type None Permit #

Type(s) of Waste 1. Organic soluble oil Quantity 1 gal/month

base liquid

Site Area 120'x 240' Land Usage Rate/Yr. N/A

Land Remaining 120'x 240'

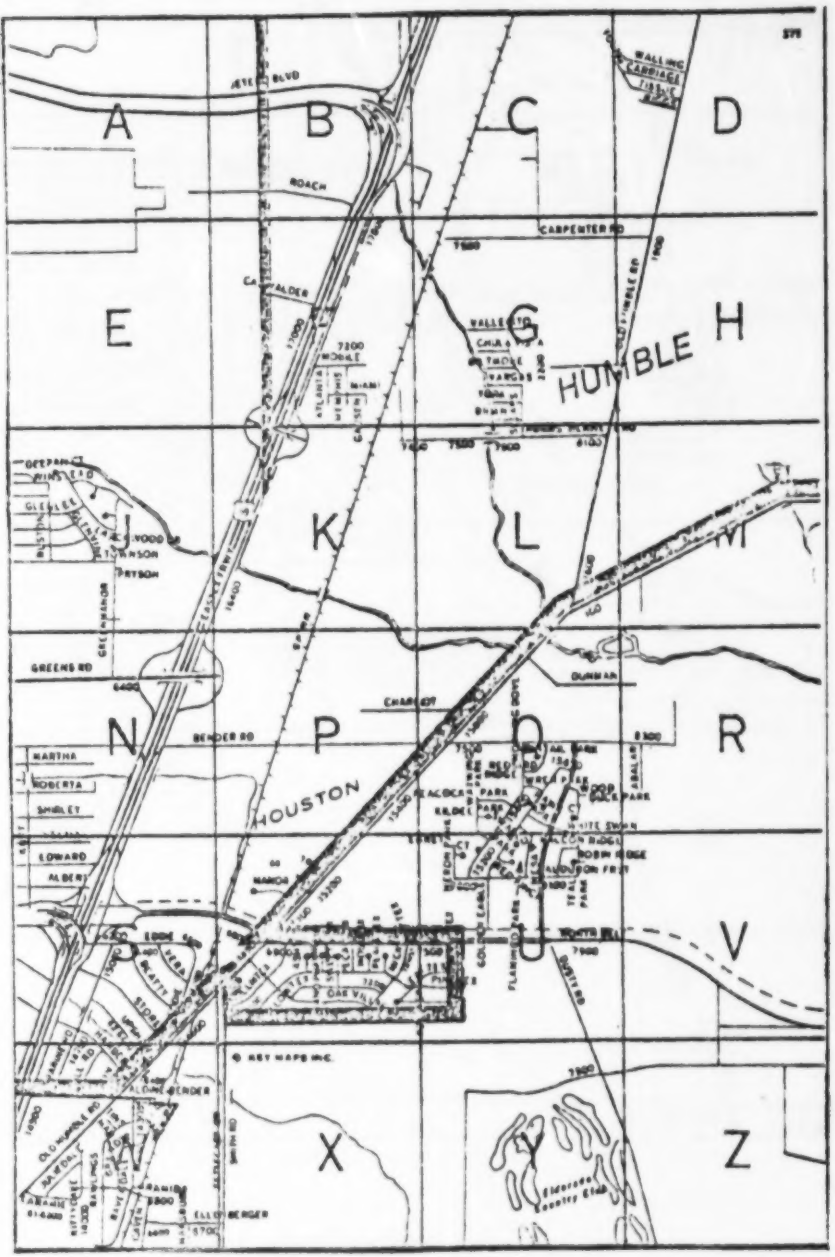
Life Expectancy Indefinite

Relationship to Nearby Watercourses Unnamed ditch about 150' to the north and northeast which empties into Greens Bayou 1¼ miles south.

Leachate Handling Techniques
(Description & Evaluation) No leachate facilities.

Comments
(Site Adequacy Evaluation) Minute amounts of oil base liquid estimated at one part oil to 50 parts water is absorbed into soil and gravel area of approximately 2' x 10' along site fenceline.

CHALLENGE MACHINE WORKS, INC. MAP



Date March 11, 1976

Operator Bob Horner and Tommy Thurmond

Surveyors Bill Stulken, Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name A. B. Chance Company Phone: 433-2401

Facility Address 12317 Almeda Road

Permit Type TWQB Permit # 20697

Type(s) of Waste Sulfuric acid Quantity 25,000 gals/month

Iron and zinc caustic

diluted with 95% water

Site Area 60' x 40' lagoon 5' deep Land Usage Rate/Yr. N/A

Land Remaining 60' x 40'

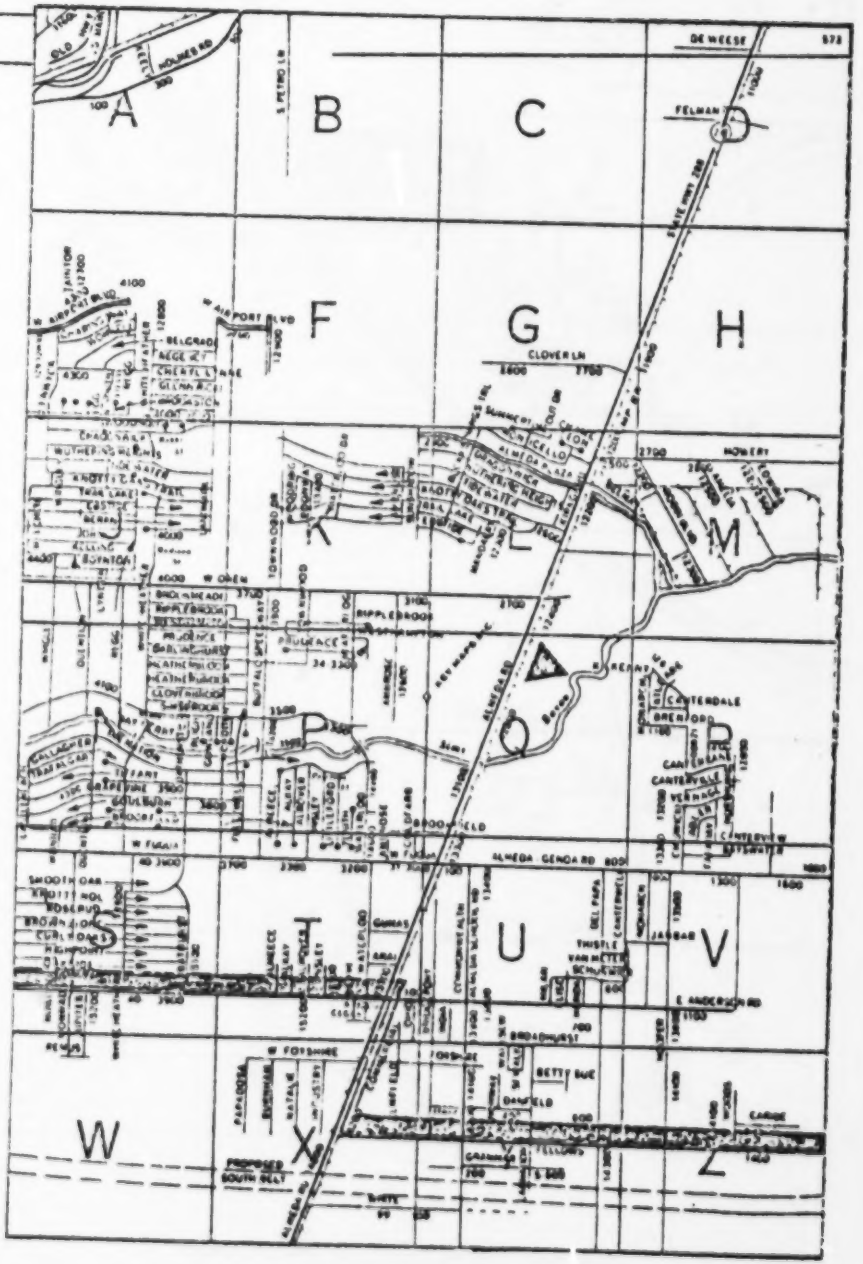
Life Expectancy Indefinite

Relationship to Nearby Watercources Sims Bayou approximately ¼ mile southeast of the site.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities. Normal lagoon system pumped out as necessary by Chemline Chemical tank trucks, with the sludge agitated to facilitate removal.* Lagoon is lined with DuPont Hypoline liner.

Comments (Site Adequacy Evaluation) *Although a permitted site, the waste is deposited in the lagoon only when Chemline Chemical is unable to remove on schedule. Site appeared adequate for the situation.

A. B. CHANCE COMPANY MAP



Date April 7, 1976

Operator Chal Shrader

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Continental - Emsco Company

Facility Address 7600 S. Santa Fe Drive, Houston Phone: 645-3361

Permit Type None Permit # _____

Type(s) of Waste II. Industrial solids-paper, trash, scrap wood — Quantity 25 tons/month

I. Waste oil, coolants, solvents — 290 gals/month

Site Area 20 acres Land Usage Rate/Yr. N/A

Land Remaining 20 acres

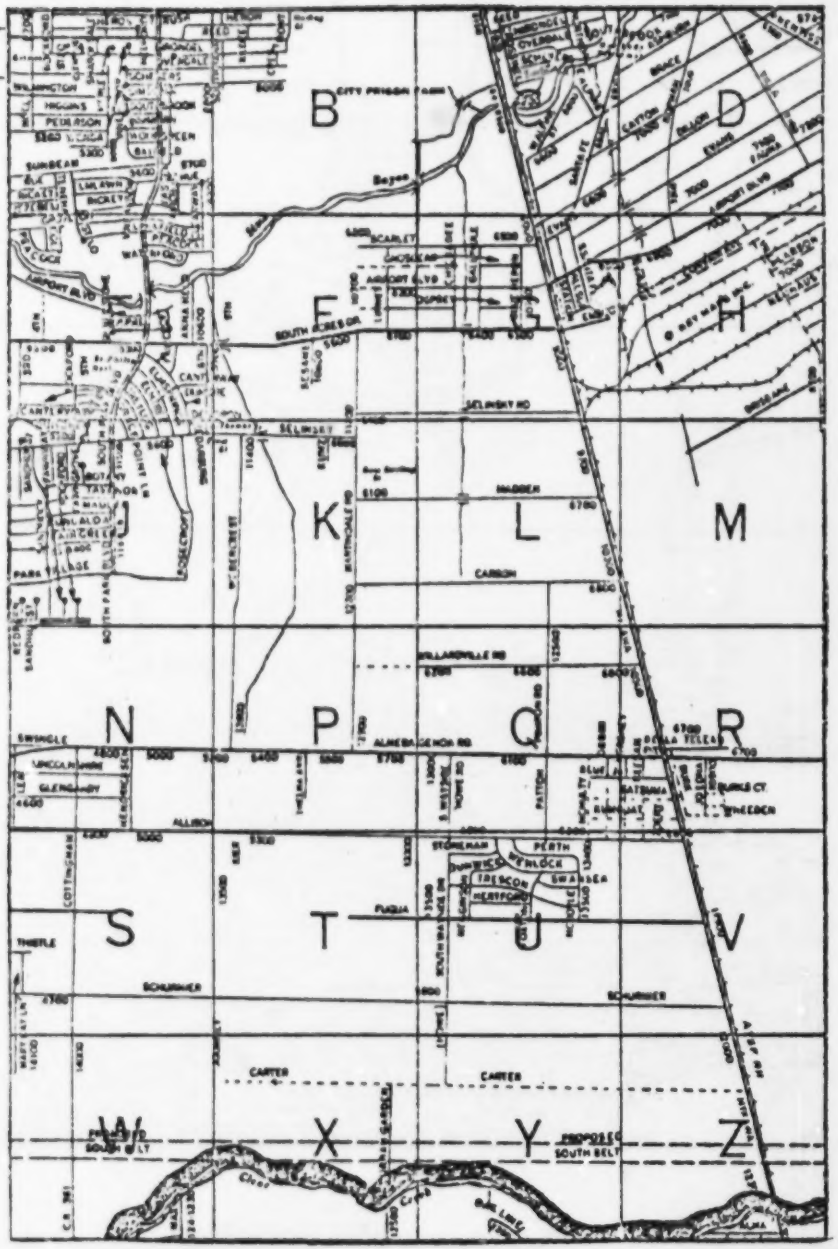
Life Expectancy Indefinite

Relationship to Nearby Watercources Unnamed ditches 1/3 mile east and 1/3 mile west join Sims Bayou 3/4 mile due north.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence.

Comments (Site Adequacy Evaluation) Industrial solids are incinerated with the ash residue hauled from the site. Waste oils, coolants and solvents are spread on the company roads and flat yard areas to settle dust and solidify roadbeds, with little runoff evident. Site appeared adequate.

CONTINENTAL-EMSCO COMPANY MAP



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Date March 12, 1976

Operator Hedley Jackson

Surveyors Bill Stulken
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Diamond Shamrock Corporation - Greens Bayou Plant

Facility Address End of Haden Road

Permit Type TWQB Permit # 20286

Type(s) of Waste Salts contaminated with herbicides Quantity 300 to 2,250 tons/month

Site Area 7.19 acres Land Usage Rate/Yr. 1/3 to 1/2 acre/year

Land Remaining 3.5 acres

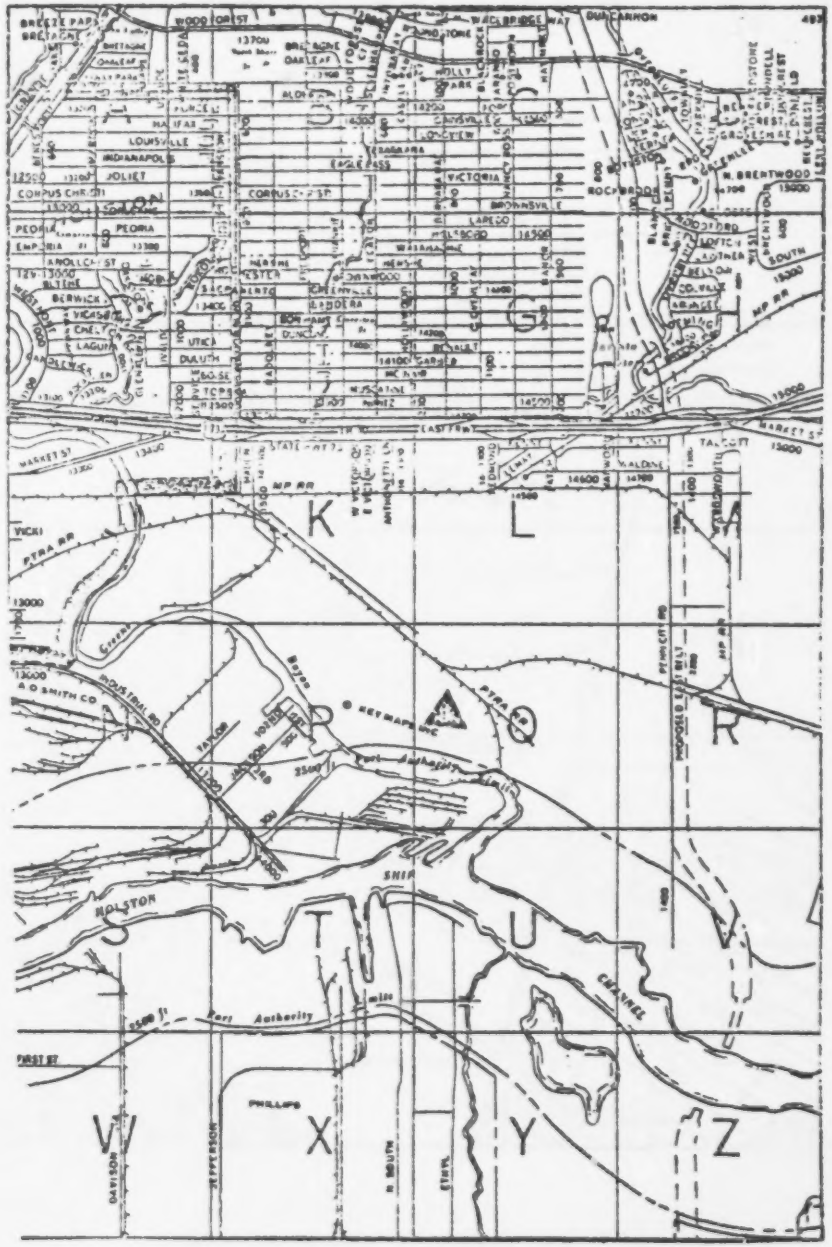
Life Expectancy 3 years

Relationship to Nearby Watercources Site is separated from Green's Bayou by high levee-roadbed.

Leachate Handling Techniques (Description & Evaluation) No leachate or treatment facilities in evidence. The water evaporation rate has been higher than rainwater and runoff collection.

Comments (Site Adequacy Evaluation) Site appeared adequate to handle the type and quantity of wastes being deposited.

DIAMOND SHAMROCK CORPORATION MAP
GREENS BAYOU PLANT



Date March 12, 1976

Operator Bob Adams

Surveyors Bill Stullken
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Diamond Shamrock Corporation - Deer Park Plant

Facility Address Tidal Road, Houston

Permit Type TWQB Permit # 20285

Type(s) of Waste II. Polyvinyl chloride Quantity 150 tons/month

catalyst residue 60 tons/month

I. Mercury filter cake 15 to 60 yds^3/month

total of approx. 350 tons/month

Site Area 3 site total 11.18 acres Land Usage Rate/Yr.

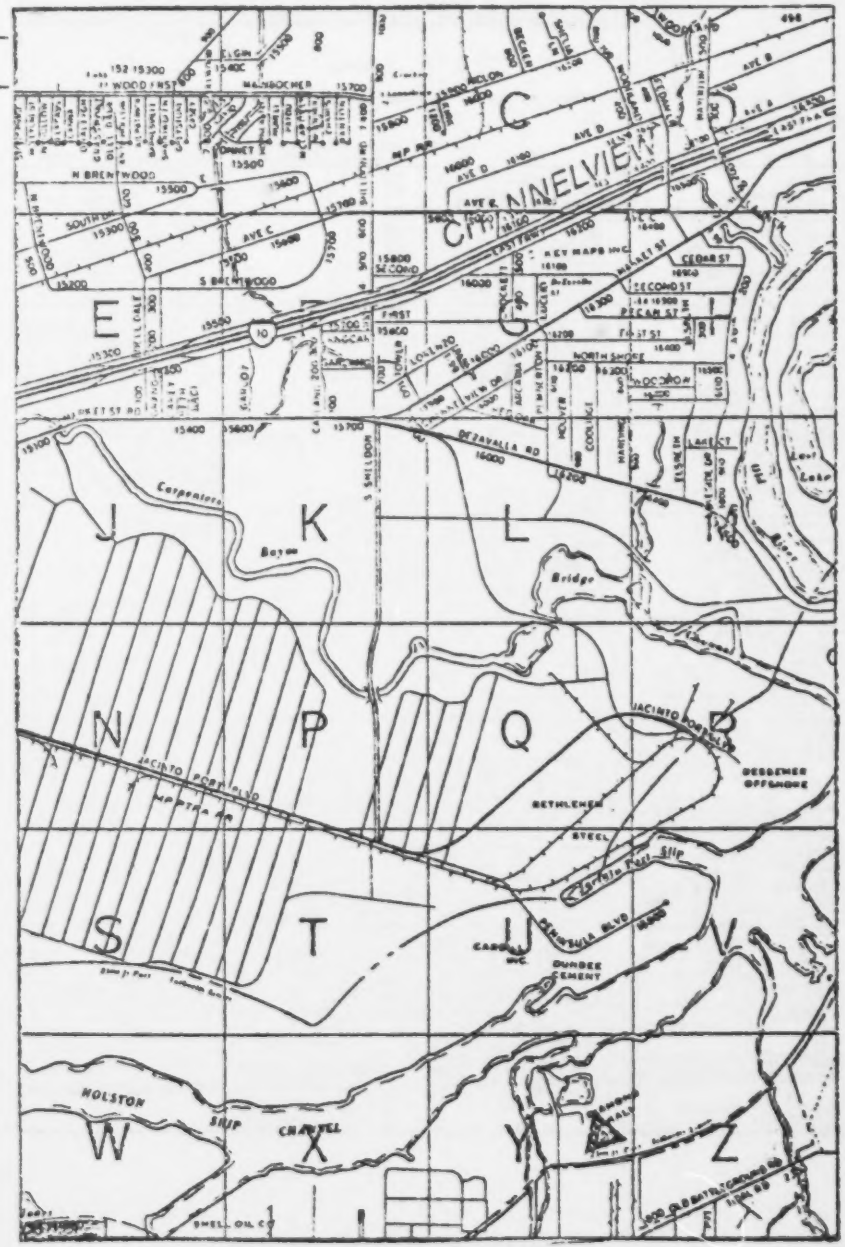
		Site A	Site B	Site C
Land Remaining	3 site variety	5.23 acres	.33 acres	5.62 acres
Life Expectancy	3 site variety	3 to 5 yrs.	5 to 7 yrs.	18 to 24 mos.

Relationship to Nearby Watercourses Site lies adjacent to Patrick Bayou on west, with Tucker's Bayou on the east and the HSC to the north.

Leachate Handling Techniques
(Description & Evaluation) Good recirculation system with secondary treatment followed by sand filtration and chlorination.

Comments
(Site Adequacy Evaluation) Site appeared adequate to handle the type and quantity of wastes being treated.

DIAMOND SHAMROCK CORPORATION MAP
DEER PARK PLANT



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Date April 8, 1976

Operator Ellis Yonda!

Surveyors Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Dresser Industries, Inc.,

Facility Address 10201 Westheimer Road, Houston Phone: 784-6033

Permit Type TWQB Permit # 00469-01

Type(s) of Waste Sewage treatment plant sludge Quantity 1/4 yds^3/month

Site Area 20'x 50' Land Usage Rate/Yr. N/A

Land Remaining 20'x 50'

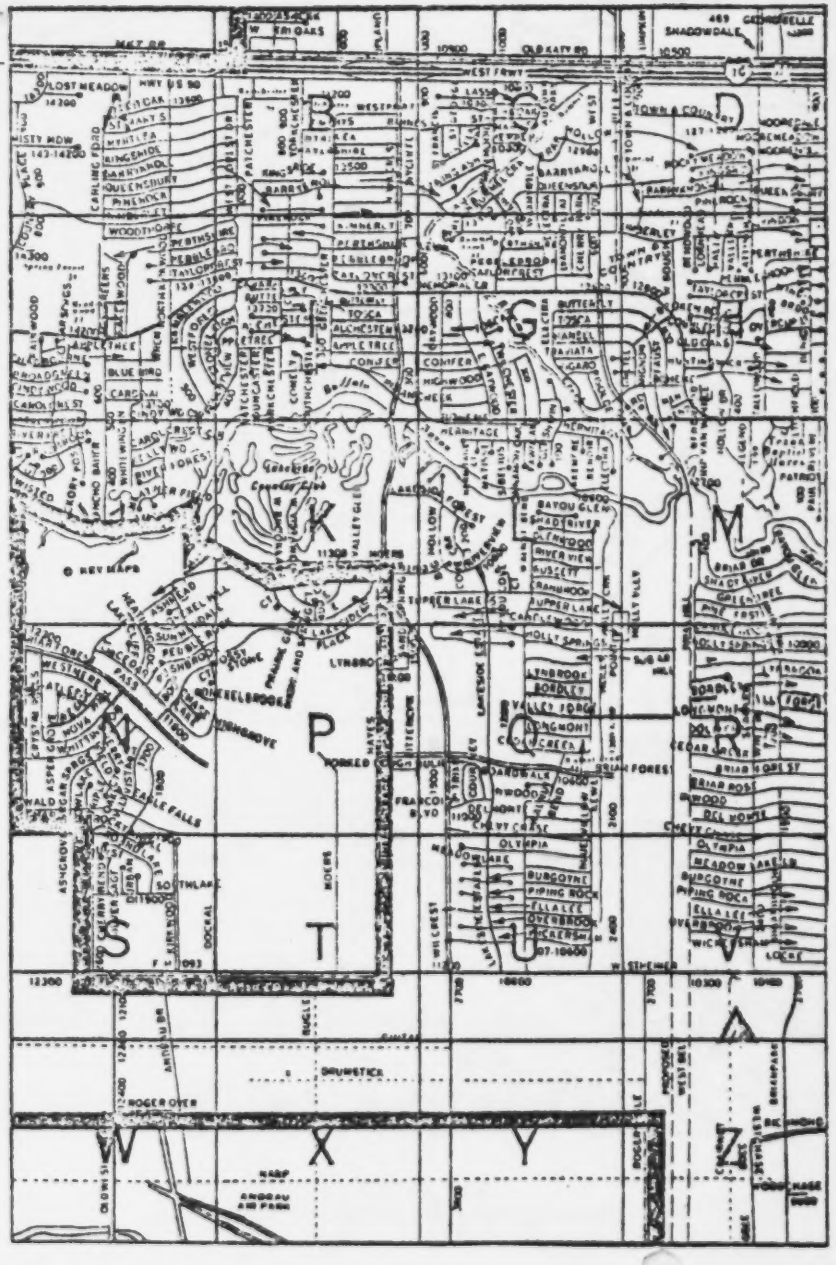
Life Expectancy Indefinite

Relationship to Nearby Watercourses Buffalo Bayou approximately 1 mile northeast. Unnamed ditch approximately 1/4 mile east.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence.

Comments (Site Adequacy Evaluation) Operation appears to be adequate and is surrounded by open fields on all sides.

DRESSER INDUSTRIES, INC. MAP



Date March 11, 1976

Operator Jack Lyons

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Du Pont Company

Facility Address Du Pont Road, P. O. Box 347 La Porte, Tx. 77571 Phone: 471-2771

Permit Type TWQB-Solid Waste Management Permit # 20416 (Registration)

Type(s) of Waste Calcium Sulfate coproduct Quantity 32,700 yds ^{3}/month
from HF manufacture

Site Area 6,225,000 cu yds Land Usage Rate*/Yr. 392,500 yds^3

Land Remaining 3,350,000 cu yds

Life Expectancy IV Q 84

*Including quanties removed for building purposes.

Relationship to Nearby Watercources Sulfate disposal site is about one half mile from San Jacinto Bay

Leachate Handling Techniques (Description & Evaluation) The site is surrounded by a diked, elevated ditch system. Supernate and rainwater discharge into the ditch and thence to a supernate reservoir for reuse. Excess supernate from the reservoir receives neutralization and settling treatment prior to discharge in the plant effluent.

Comments (Site Adequacy Evaluation) Calcium sulfate has been approved for use as a parking lot substrate and other landfill applications. The disposal facility provides for recycling of supernate and rainwater. The site was adequate for the type and quantity of wastes being deposited.

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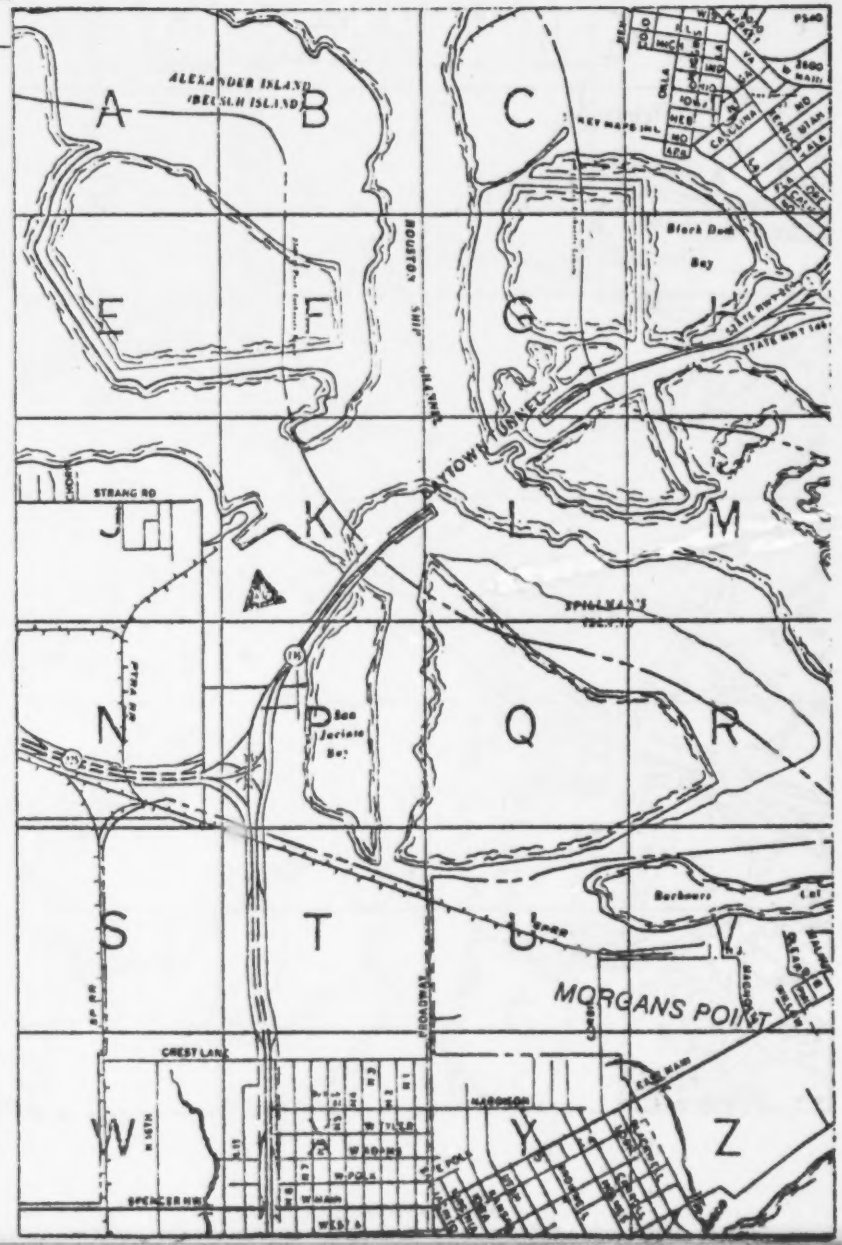
DU PONT COMPANY MAP



Date March 11, 1976

Operator Jack Lyons

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Du Pont Company

Facility Address P. O. Box 347, La Porte, Texas 77571

Permit Type TWQB (Solid Waste Management) Permit # 20417 (Registration)

Type(s) of Waste	Quantity
Settled solids from treatment ponds	80 cu. yds/month
Mn, Zn hydroxides	420 cu yds/month
Waste Chemicals from equipment cleanouts	20 cu. yds/month

Site Area 95,370 cu yds Land Usage Rate/Yr. 7000 cu yds

Land Remaining 56,800 cu yds

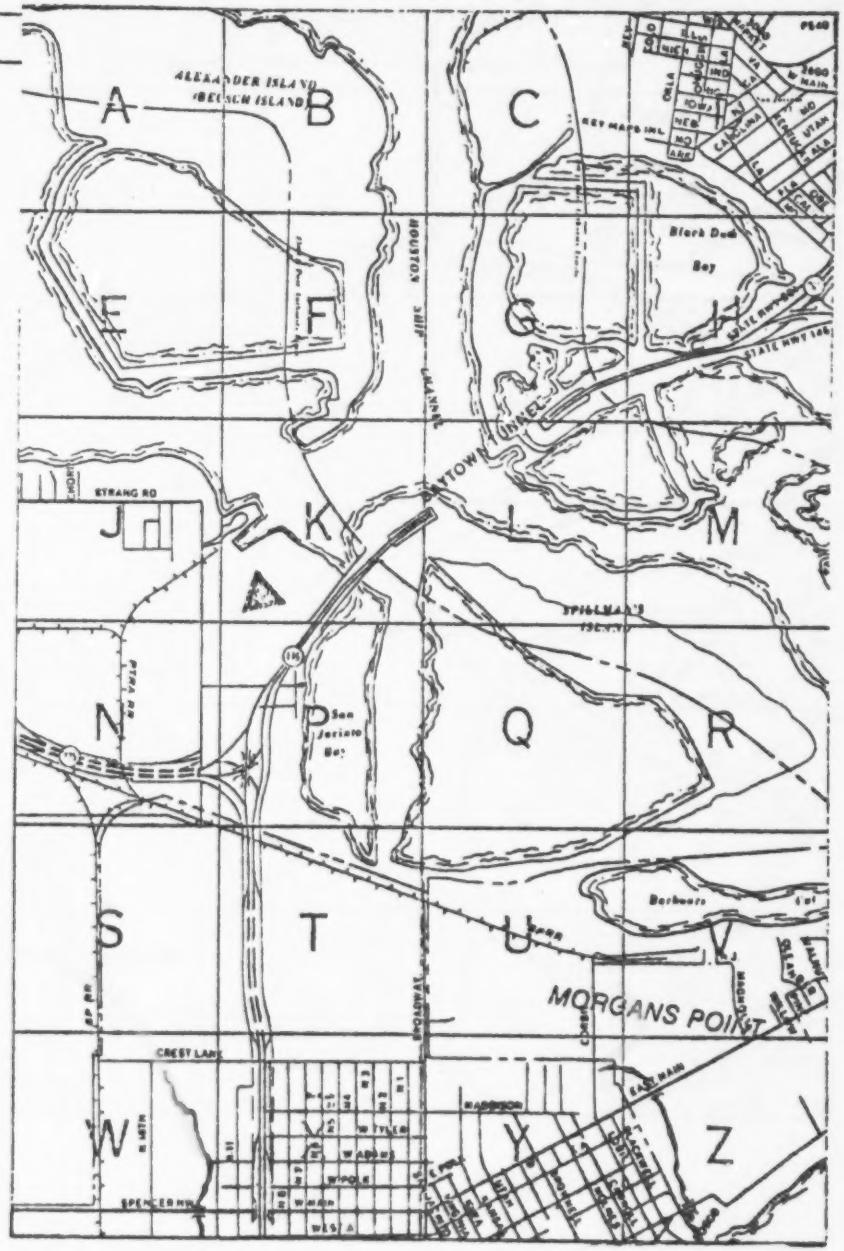
Life Expectancy IV Q 83

Relationship to Nearby Watercources Facility is near San Jacinto Bay, separated from the Bay by extensive treatment facilities.

Leachate Handling Techniques (Description & Evaluation) Engineering evaluation of clay used to construct the basin and levee are proper to prevent seepage. Decanted supernatant liquid (leachate) from the facility is chemically and biologically oxidized prior to discharge from the plant outfall.

Comments (Site Adequacy Evaluation) The facility has been effective for heavy metals removal from the plant effluent to meet State and Federal requirements. Site adequate.

DU PONT COMPANY MAP



Date April 5, 1976

Operator Leonard Vaughn

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Ethyl Corporation

Facility Address Hwy. 225 and N. South Street, Pasadena Phone: 472-2481

Permit Type None Permit # _____

Type(s) of Waste Barium sulfate Quantity 22 tons/month

water treater sludge 20 tons/month

aluminum residue 17 tons/month

polymer pits residue 1100 gals/month

Site Area 3 landfarm areas, each 10-20 acres Land Usage Rate/Yr. N/A

Land Remaining Same

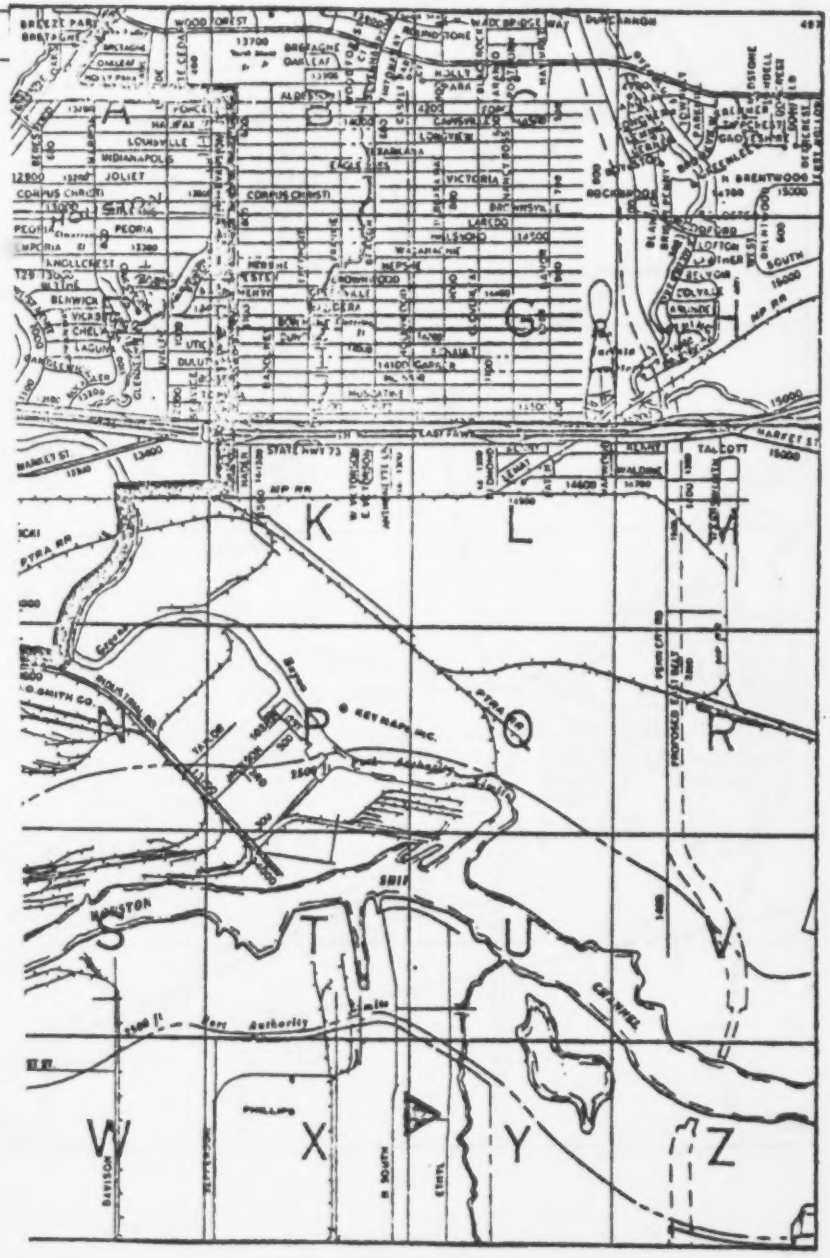
Life Expectancy Indefinite

Relationship to Nearby Watercources Houston Ship Channel adjacent to the north; unnamed bayou adjacent to Ethyl Road due east of the site.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities were in evidence. Some stormwater collection facilities were in place but appeared inadequate to contain heavy rainfall.

Comments (Site Adequacy Evaluation) Site appeared adequate under normal conditions, but prolonged or intensive rainfall or 6' surge tide could cause problems.

ETHYL CORPORATION MAP



Date March 1, 1976

Operator Alan Updegraff and Mr. Witte

Surveyors Tom Samson, Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Exxon Corporation

Facility Address San Jacinto - Bayway - Wooster Cedar Bayou, Baytown

Permit Type TWQB Permit # 20658

Type(s) of Waste Sludges & oily sediment Quantity 13,296 yds^3/month

Site Area 5 sites, total 20 acres Land Usage Rate/Yr. N/A

Land Remaining 20 acres

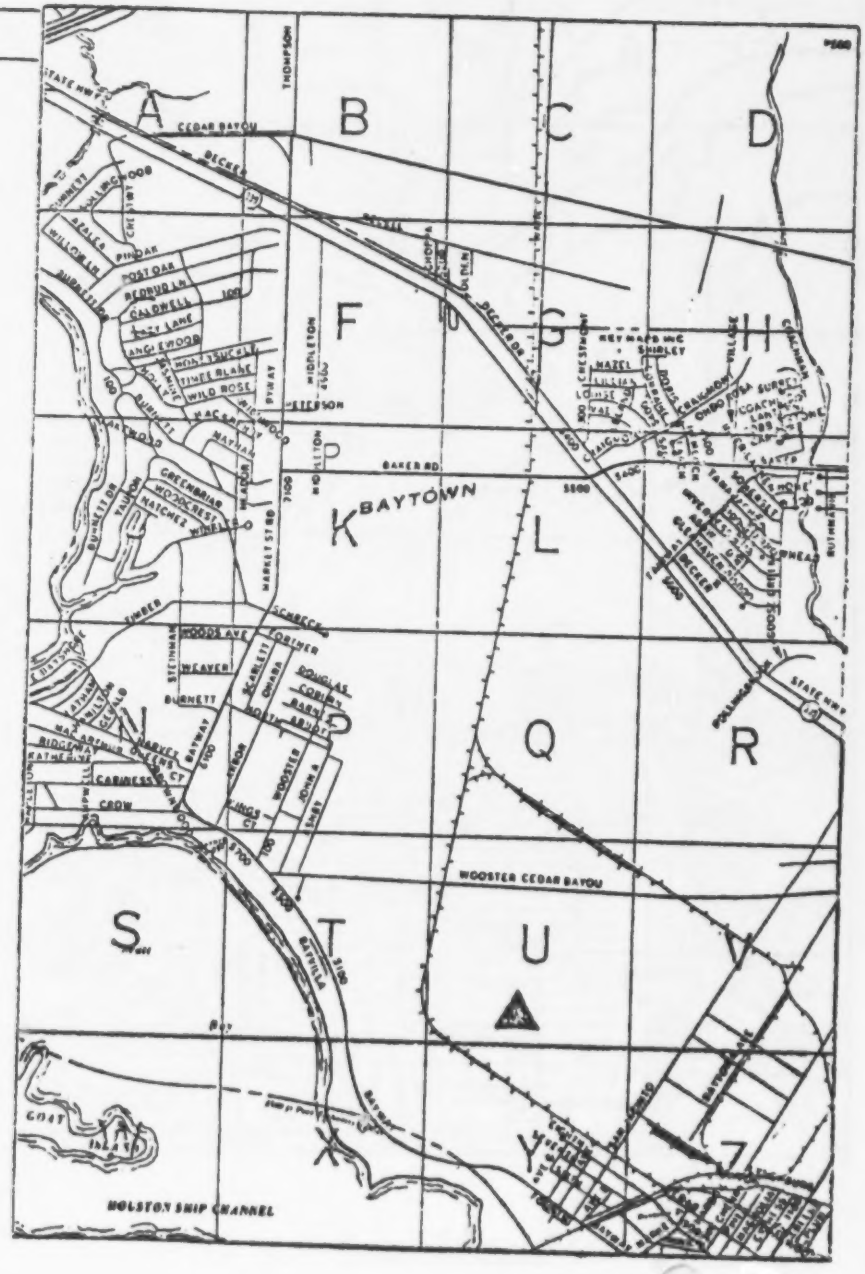
Life Expectancy 10 years+

Relationship to Nearby Watercourses Houston Ship Channel directly adjacent on southwest, Scott Bay due west, Black Duck Bay due south.

Leachate Handling Techniques (Description & Evaluation) No leachate treatment as such, but all areas drain through plant treatment facilities prior to entry into H.S.C. Heavy stormwater runoff flows directly into HSC, but large runoff facility is now under construction which will handle 145 million barrels.

Comments (Site Adequacy Evaluation) Site appeared adequate under normal circumstances. Severe weather conditions or storm surge could possibly cause some problems with the waste treatment system.

EXXON CORPORATION MAP



Date March 5,1976

Operator Mr. Muller

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Goodyear Tire and Rubber Company Phone: 477-8801

Facility Address 2000 Goodyear Road

Permit Type TWQB Permit # 20502

Type(s) of Waste	Quantity
II., Waste Rubber	470 yds^3/month
Water treatment solids/sludge	220 tons/month
construction wastes	5 tons/month
secondary wastewater sludge	1,500,000 gals/month

Site Area 11 acres Land Usage Rate/Yr. N/A

Land Remaining 11 acres

Life Expectancy 20 years

Relationship to Nearby Watercources Adjacent to Sims Bayou

Leachate Handling Techniques
(Description & Evaluation) Runoff and leachate are collected in a holding pond where supernate is placed in the wastewater treatment system. This technique appears adequate.

Comments
(Site Adequacy Evaluation) The operation of this facility is adequate to handle the amount and type of waste being generated.

GOODYEAR TIRE AND RUBBER COMPANY MAP

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Date April 8, 1976

Operator Dewey Rhodes

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Green Thumb Products (formerly Delta Industries)

Facility Address Howton and Fitzhugh, Houston

Permit Type TWQB Permit # 20322

Type(s) of Waste Rice hulls Quantity Inactive

Site Area 8.68 acres Land Usage Rate/Yr. N/A

Land Remaining 8.68 acres

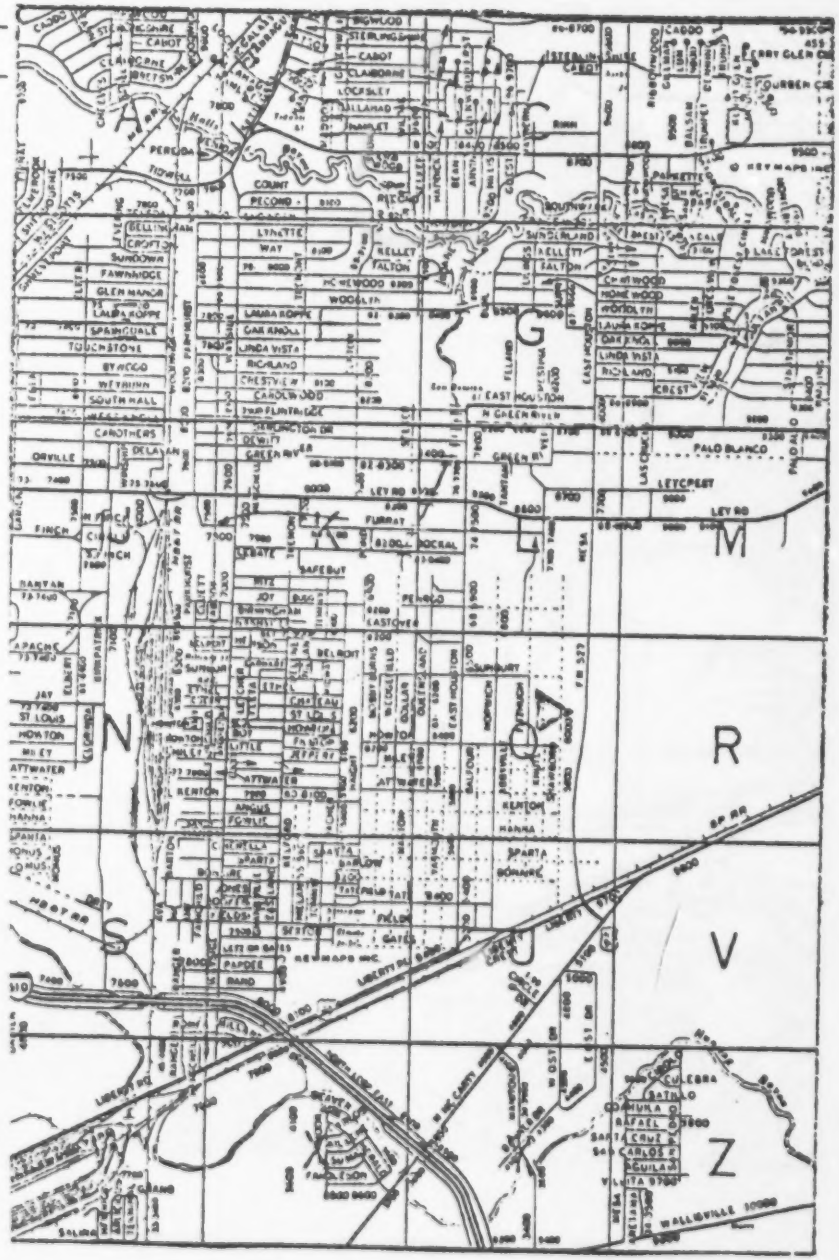
Life Expectancy N/A

Relationship to Nearby Watercourses Unnamed branch of Hall's Bayou ¼ mile NE, and Hunting Bayou 1¼ mile due south.

Leachate Handling Techniques
(Description & Evaluation) No leachate facilities in evidence.

Comments
(Site Adequacy Evaluation) Site was covered with water and being used as fishing pond. This site is not being used for disposal purposes anymore.

GREEN THUMB PRODUCTS MAP



Date March 2, 1976

Operator Mr. Skinner

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Gulf Oil Chemicals Company Phone: 427-5681

Facility Address 9800 IH 10 Baytown

Permit Type TWQB Permit # 20707

Type(s) of Waste Various treatment and process sludges Quantity 15,880,000 gals/month

Site Area 30' x 50' pellet pond 30 acres *Land Usage Rate/Yr. N/A

Land Remaining 30 acres

Life Expectancy 20-15 years

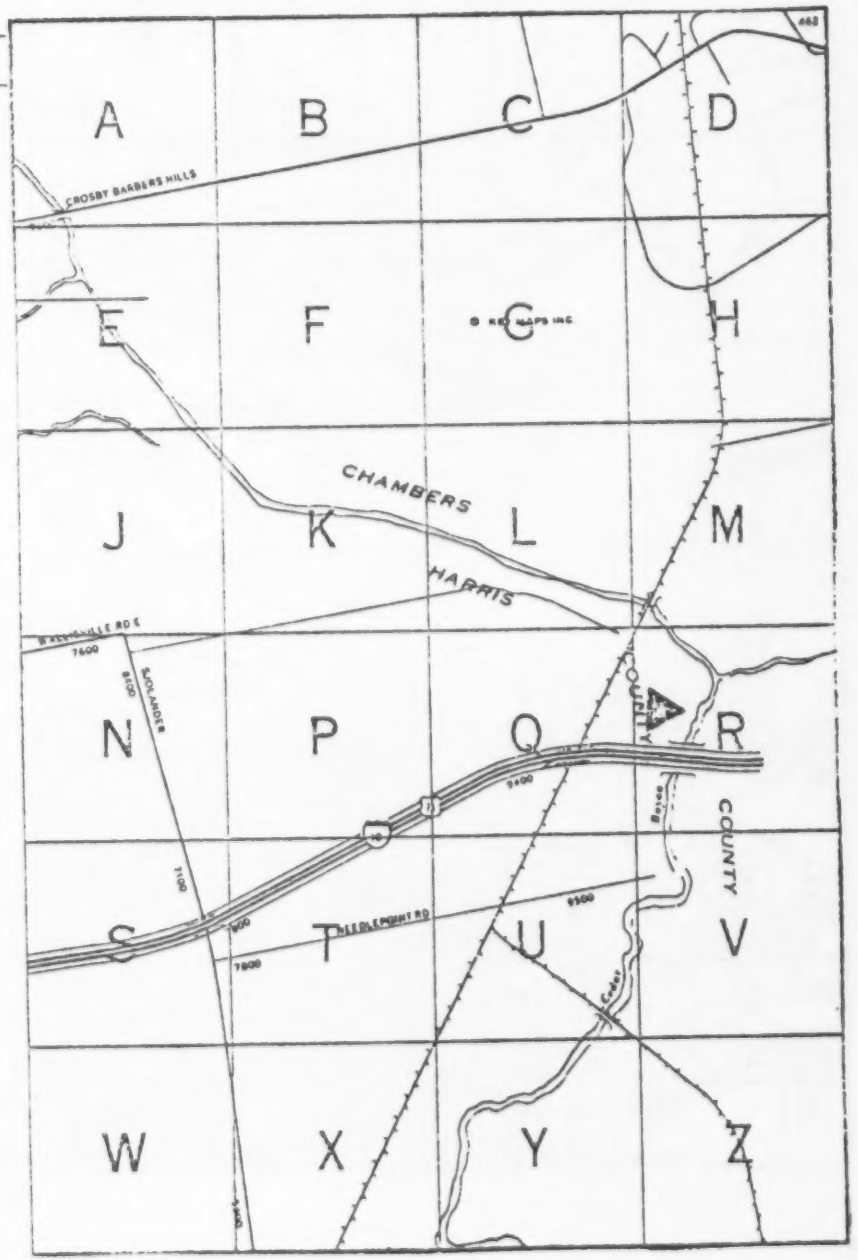
Relationship to Nearby Watercourses Cedar Bayou directly adjacent on the plant site's eastern boundary.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities were in evidence. Runoff facilities included a retention pond and recirculation through the plant treatment facilities.

Comments (Site Adequacy Evaluation) Major expansion of waste treatment systems was underway. The present solid waste disposal facilities appear adequate for the amount of waste being produced.

*800 acres used in landfarm process from three 10 acre ponds.

GULF OIL CHEMICALS COMPANY MAP



Date March 3, 1976

Operator Mr. Cockrell

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Ideal Cement Company Phone: 672-6341

Facility Address Penn City Road, Houston

Permit Type TWQB Permit # 20377

Type(s) of Waste II. Cement kiln dust Quantity Intermittent to 7,200 tons/month

Site Area 42 acres* Land Usage Rate/Yr. N/A

Land Remaining 42 acres

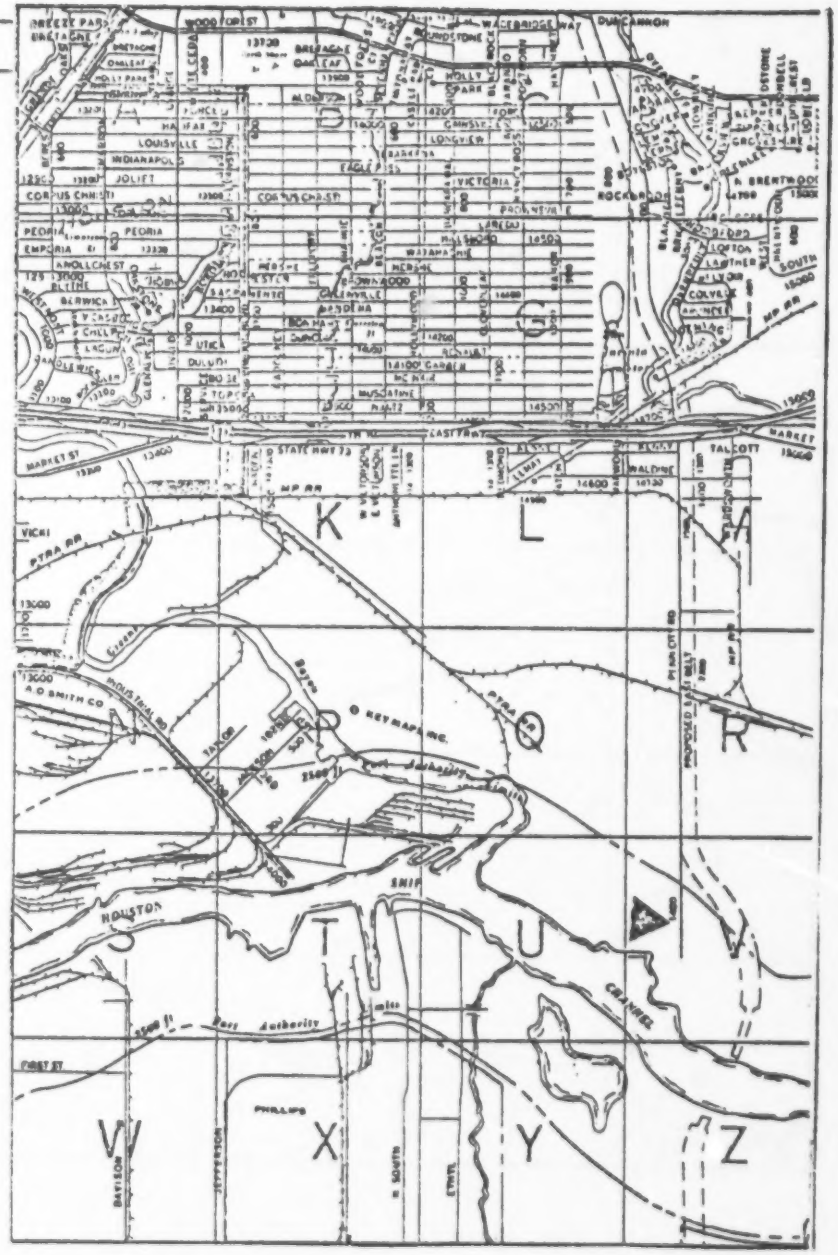
Life Expectancy Indefinite

Relationship to Nearby Watercources H.S.C. due south and adjacent to the site.

Leachate Handling Techniques (Description & Evaluation) Runoff collected in a holding pond.

Comments (Site Adequacy Evaluation) *Site for emergency use only - normal disposal off-site. This site is inactive at present and only Class III material had been placed on the site.

IDEAL CEMENT COMPANY MAP



Date April 8, 1976

Operator J. L. Wade

Surveyors Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Job-Master Sales, Inc.

Facility Address 3731 Pinemont, Houston Phone: 681-3526

Permit Type _____ Permit # _____

Type(s) of Waste 1. Machine lube oil Quantity 3 gals/month

Site Area 1 to 1½ acres Land Usage Rate/Yr. N/A

Land Remaining 1 to 1½ acres

Life Expectancy Indefinite

Relationship to Nearby Watercourses White Oak Bayou 1 mile due west.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence. Storm water runoff flows into 20' x 20' x 6' settling pond, through a hay filter into roadside ditch.

Comments (Site Adequacy Evaluation) The machine lube oil is put through a small recovery system then flushed through a pipe into the settling pond, the hay filter, and the roadside ditch. Site appears adequate.

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JOB-MASTER SALES, INC. MAP

Date April 7, 1978

Operator Joe Gonzalez, Jr.

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Kirby Steel Products Company

Facility Address 1102 HUB, Houston Phone: 928-3191

Permit Type None Permit #

Type(s) of Waste 1. Hydrochloric acid Quantity 1 gal/month

Site Area 10' x 12' shell bed Land Usage Rate/Yr.

Land Remaining 10' x 12' shell bed

Life Expectancy Indefinite

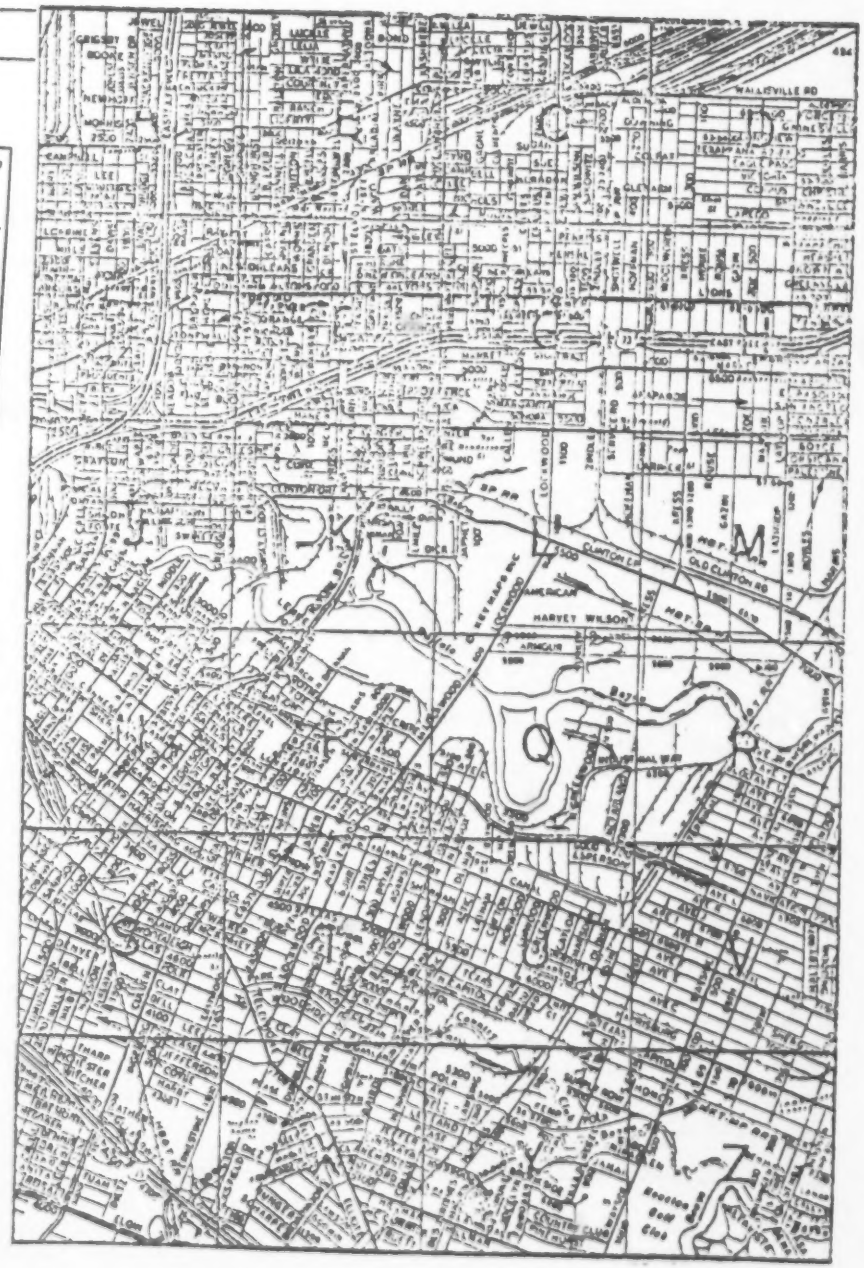
Relationship to Nearby Watercourses Adjacent to Yates Bayou to the north.

Leachate Handling Techniques
(Description & Evaluation) No leachate facilities were in evidence.

Comments
(Site Adequacy Evaluation) The shell bed appeared adequate to neutralize the HCL.

Reproduced from best available copy.

KIRBY STEEL PRODUCTS COMPANY MAP



Date April 7, 1976

Operator B. R. White

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Landreth Engineering Company

Facility Address 8700 Scranton, Houston Phone: 944-7400

Permit Type None Permit #

Type(s) of Waste I. Plating line waste with metal hydroxides and salts. Quantity 1/2 yds^3/month

Site Area 10 acres Land Usage Rate/Yr. N/A

Land Remaining 10 acres*

Life Expectancy 2 years

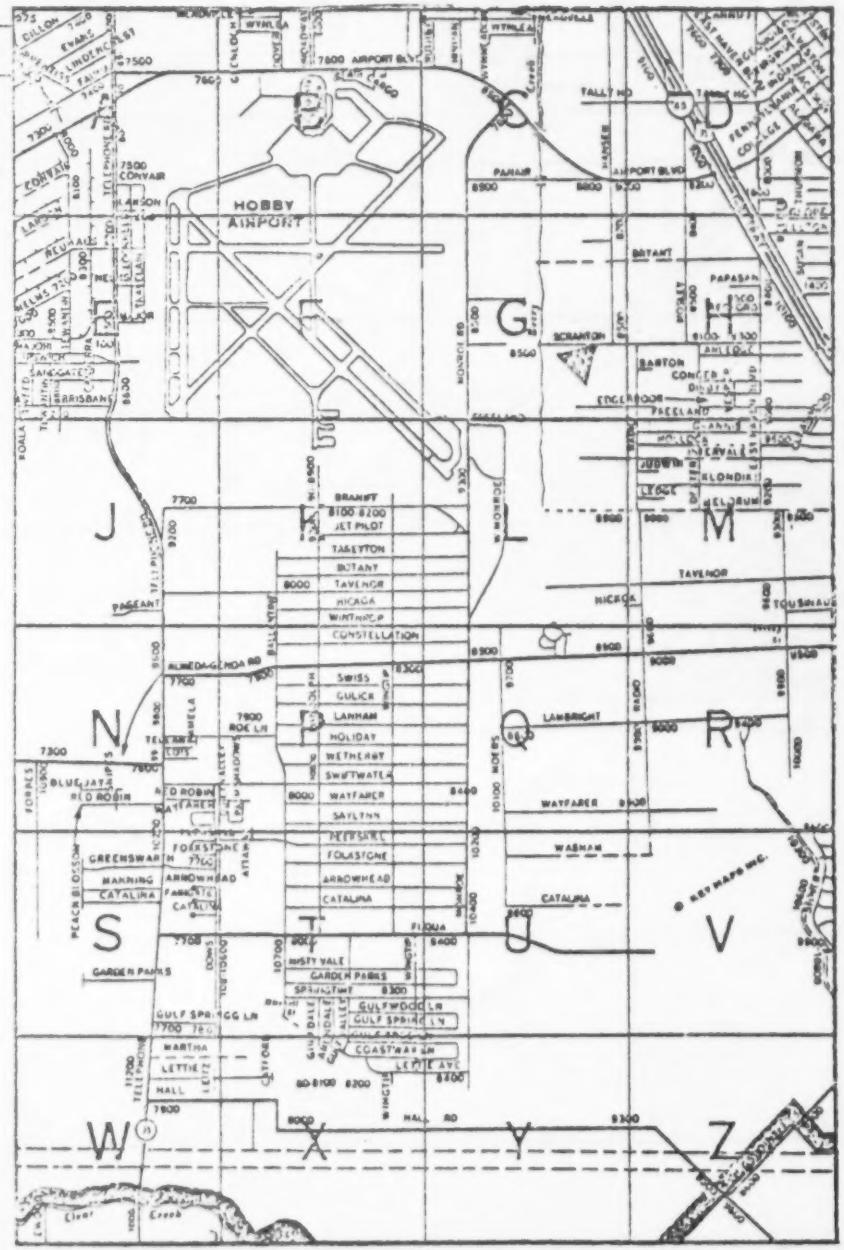
Relationship to Nearby Watercources Berry Creek due west 1/4 mile.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence.

Comments (Site Adequacy Evaluation) Substance is dried and landfilled in tight-weave burlap bags. Site appears adequate.

*This area is being used until plant expansion occurs.

LANDRETH ENGINEERING COMPANY MAP



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Date April 3, 1974

Operator J. D. Divin

Surveyors Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Mid-Continent Pipeline Equipment Company

Facility Address 12,000 Fisher Road, Houston Phone: 466-6781

Permit Type None Permit #

Type(s) of Waste II. Spent alkaline detergent solution Quantity 55 gals/month

Site Area N/A Land Usage Rate/Yr.

Land Remaining

Life Expectancy

Relationship to Nearby Watercourses Turkey Creek ½ mile west. Unnamed stream segment ¼ mile north flows into South White Oak Bayou.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities in evidence, nor runoff treatment facilities.

Comments (Site Adequacy Evaluation) Solution is biodegradable, diluted 40 x 1 with water. Site appeared inadequate in that no treatment of the effluent was done, and the effluent was simply channeled through a closed drainpipe into a roadside ditch. No on-site disposal as such took place.

MID-CONTINENT PIPELINE EQUIPMENT COMPANY MAP

Date March 2, 1976

Operator John Murray

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Olin Corporation

Facility Address Davison and First Streets

Permit Type TWQB Permit # 20105

Type(s) of Waste II. Gypsum-calcium sulfate Quantity 87,000 tons/month

Water treatment plant sludge

Site Area 152 acres Land Usage Rate/Yr. 15 acres/year

Land Remaining 150 acres

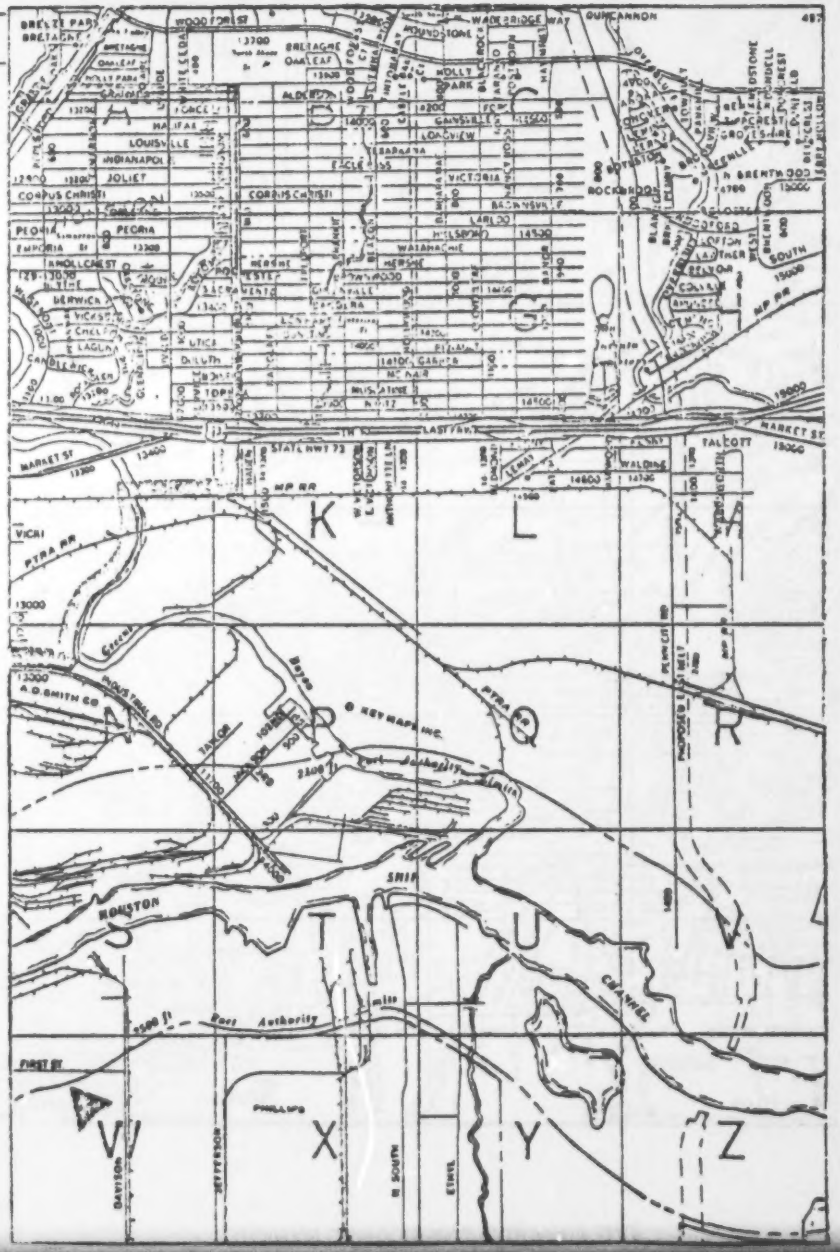
Life Expectancy 10 + 4 years

Relationship to Nearby Watercources 3/4 mile south of H.S.C.

Leachate Handling Techniques
(Description & Evaluation) Collection ditches surrounding gypsum deposition sites. Leachate and runoff sent to industrial wastewater treatment system for treatment.

Comments
(Site Adequacy Evaluation) No apparent problems associated with the placement sites at this facility.

OLIN CORPORATION MAP



Date February 4, 1976

Operator Harry Dokall

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Olshan Demolishing Company

Facility Address 5020 Acorn - off Mangum Road

Permit Type TWQB Permit # 20032

Type(s) of Waste Demolition waste Quantity 10,000 yds^3/month

tires, brush

Site Area 11-12 acres Land Usage Rate/Yr. 2 acres/year

Land Remaining 1 acre or less

Life Expectancy 10 - 11 months*

Relationship to Nearby Watercourses Cole Creek lies ½ mile north of the site, Brickhouse Gully lies 3/4 mile due south, and White Oak Bayou 3/4 mile due east receives the flow of both streams.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities were in evidence, nor any facilities to catch and hold runoff.

Comments (Site Adequacy Evaluation) *Site virtually full. Site appeared adequate for the type and quantity of waste being deposited. Mostly inert materials contained inside fence. Some local garbage was in evidence.

OLSHAN DEMOLISHING COMPANY MAP

Date April 5, 1976

Operator Warren Raymond

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Pearsall Chemical Corporation

Facility Address 9401 Strang Road, Deer Park Phone: 476-4321

Permit Type TWQB Permit # 01785

Type(s) of Waste Aluminum hydroxide Quantity 16 tons/month

Site Area 50'x 100'pond Land Usage Rate/Yr. N/A

Land Remaining 50'x 100'

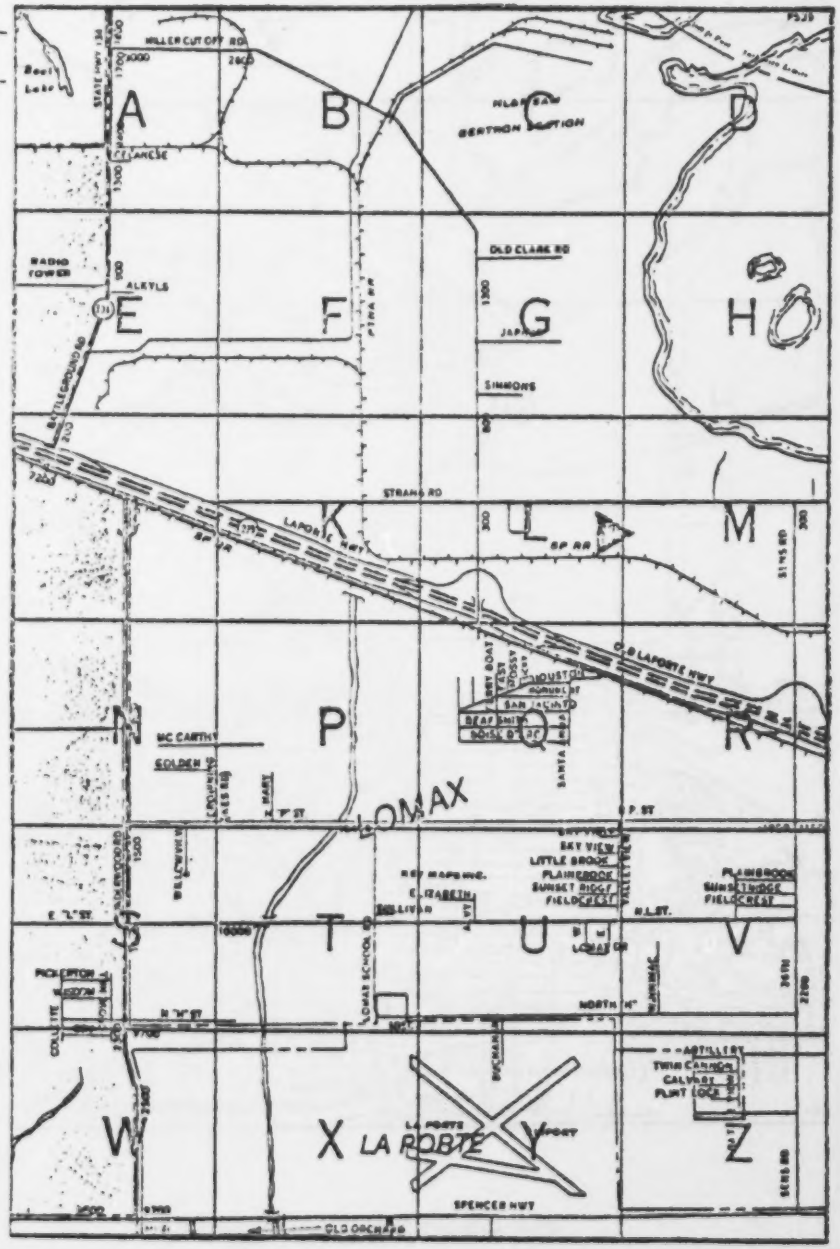
Life Expectancy 4 to 6 months

Relationship to Nearby Watercourses Big Island Slough 1/2 mile west, San Jacinto Bay 1 mile north.

Leachate Handling Techniques
(Description & Evaluation) No leachate facilities were in evidence. Storm-water runoff was channeled to a 100' x 200' holding pond.

Comments
(Site Adequacy Evaluation) The 50'x 100' precipitating pond was inadequate, being full to point of overflow. Site is expected to reduce operations after approximately 6 more months.

PEARSALL CHEMICAL CORPORATION MAP



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Date February 25, 1976

Operator Gordon Stoltz

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Phillips Petroleum Company Phone: 477-9281

Facility Address Phillips Company Road, Box 792, Pasadena - 1 mile south of H.S.C.

Permit Type TWQB Permit # 20221

Type(s) of Waste II. Water treater sludge Quantity 147-180 tons/month

channel dredgings 6,660-8,333 tons/month

polypropylene & polyethylene mix 180-240 tons/month

polyethylene 19,500-22,500 tons/month

Site Area 200 acres Land Usage Rate/Yr. N/A

Land Remaining N/A

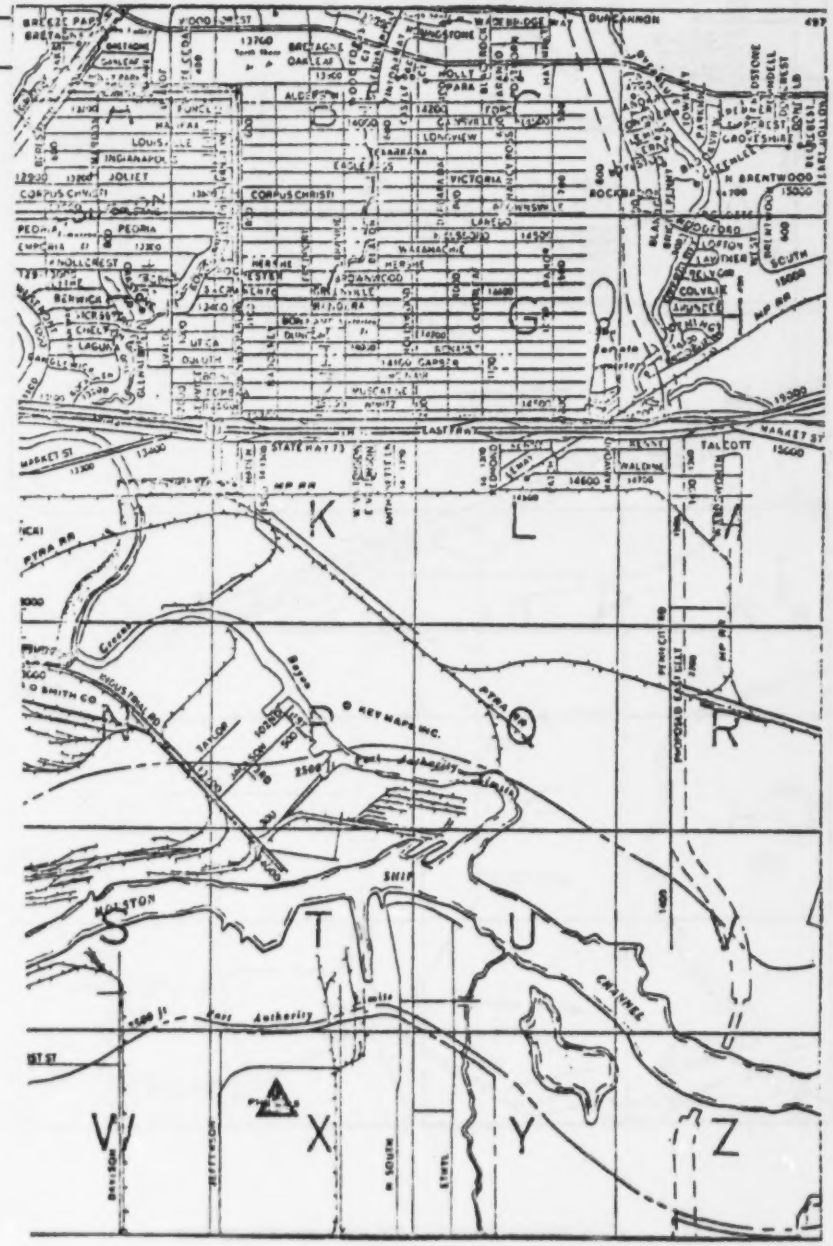
Life Expectancy 3-5 years

Relationship to Nearby Watercources Houston Ship Channel lies due north.

Leachate Handling Techniques
(Description & Evaluation) Catchment system surrounds inactive gypsum pile of 25 to 30 acres funneling leachate & runoff through an adaptation of the API hay filter in a mixed basin. Water from inert sludge settling ponds is pumped off through the plant treatment system.

Comments
(Site Adequacy Evaluation) Site appeared adequate for the quantity and type of material being handled.

PHILLIPS PETROLEUM COMPANY MAP



Date March 4, 1976

Operator Mr. Meceiras

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Proler International

Facility Address 7501 Wallisville Road, Houston (Site Address: 7400 Liberty Road)

Permit Type TWQB Permit # 20743

Type(s) of Waste Waste metals Quantity 1,770 yds^3/month

Site Area 20 acres Land Usage Rate/Yr. 2-4 acres/year

Land Remaining 20 acres

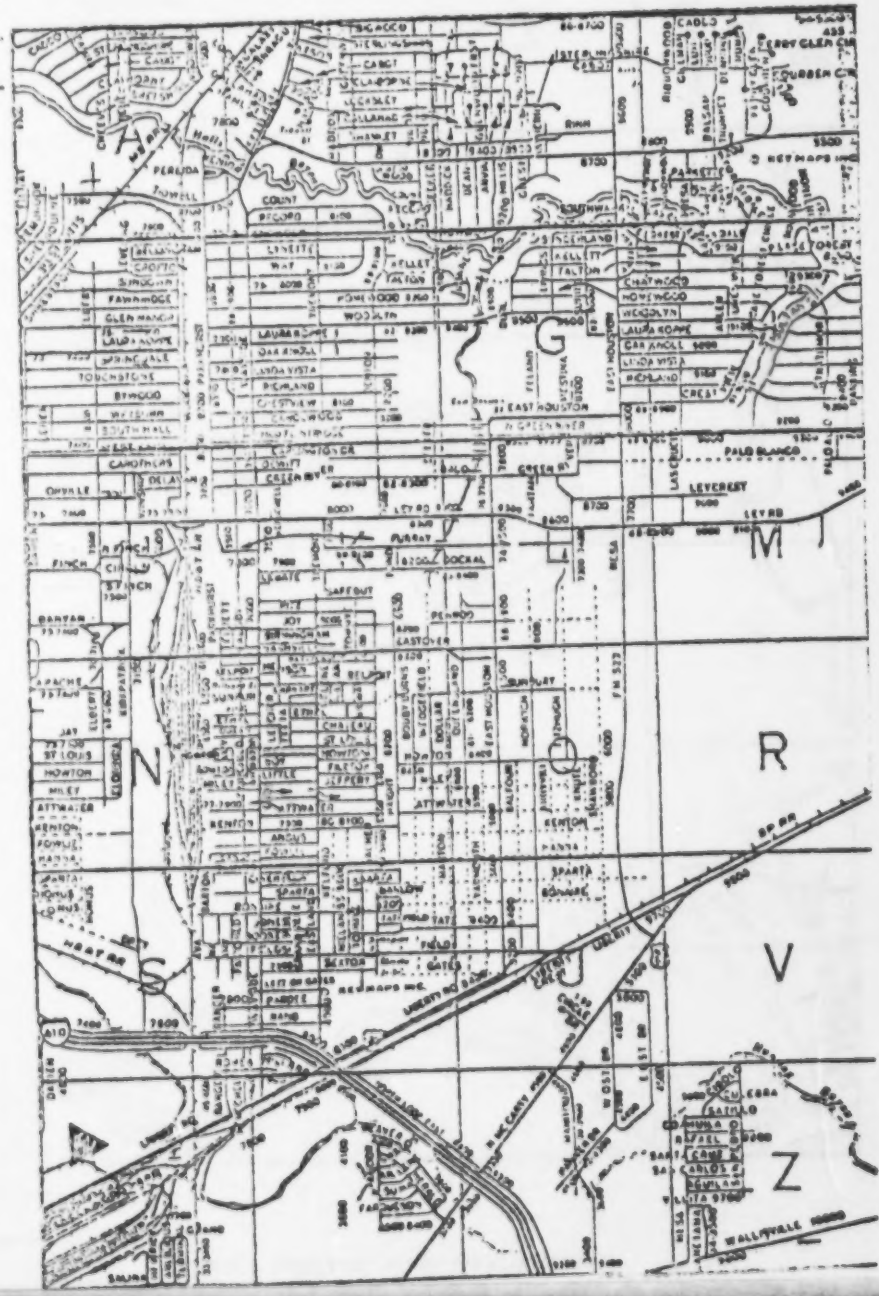
Life Expectancy 5 to 10 years

Relationship to Nearby Watercourses Hunting Bayou due north.

Leachate Handling Techniques (Description & Evaluation) Leachate and runoff water are used in the plant operations.

Comments (Site Adequacy Evaluation) This site appeared to be adequate for the amount and type of material being placed there.

PROLER INTERNATIONAL MAP



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Date March 9, 1976

Operator Odis Campbell & H. L. Cadwallader

Surveyors Tom Samson and Bonnie Davis

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Quality Electric Steel Castings

Facility Address Van/Deaf Smith Road next to San Jacinto River

Permit Type TWQB Permit # 20466

Type(s) of Waste III. Bentonite clay - spent foundry sand

Quantity 400 yds^3/month

Site Area 20 acres Land Usage Rate/Yr. 1 acre/year

Land Remaining 10 acres

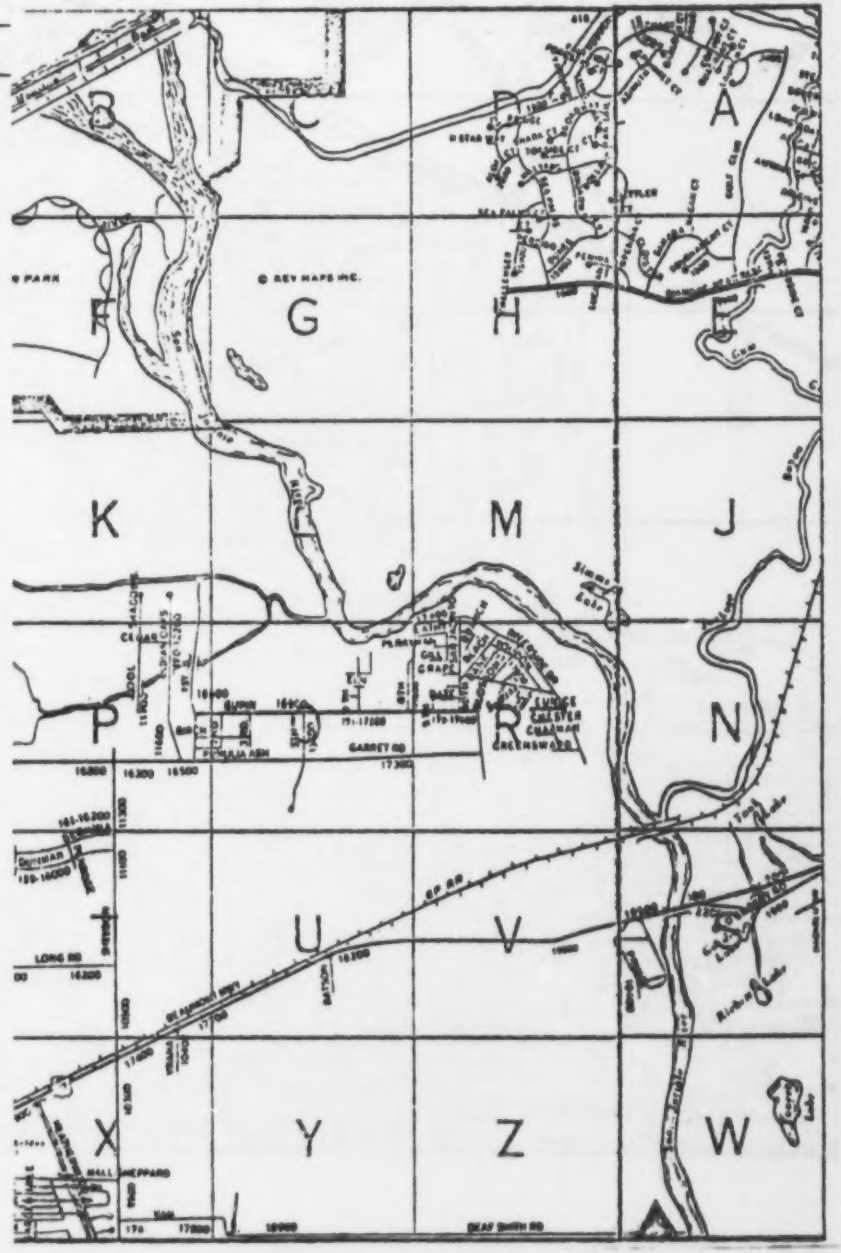
Life Expectancy 9 years

Relationship to Nearby Watercources San Jacinto River due east.

Leachate Handling Techniques (Description & Evaluation) N/A

Comments (Site Adequacy Evaluation) Site appeared adequate for the Class III material being placed there.

QUALITY ELECTRIC STEEL CASTINGS MAP



Date April 5, 1976

Operator Don Derby

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Reichhold Chemicals, Inc.

Facility Address 1503 Haden Road Phone: 453-5431

Permit Type TWQB Permit # 00662

Type(s) of Waste II. Biological sludge Quantity 30 tons/month

I. Spent motor oil 55 gals/month

Site Area 70,000 sq. ft. Land Usage Rate/Yr. N/A

Land Remaining 70,000 sq. ft.

Life Expectancy 1 to 2 years

Relationship to Nearby Watercourses 100' from Green's Bayou; the Houston Ship Channel lies approximately 3/4 mile south.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities were in evidence. Stormwater runoff was returned to the treatment plant.

Comments (Site Adequacy Evaluation) Site appeared adequate for the type and amount of wastes being treated.

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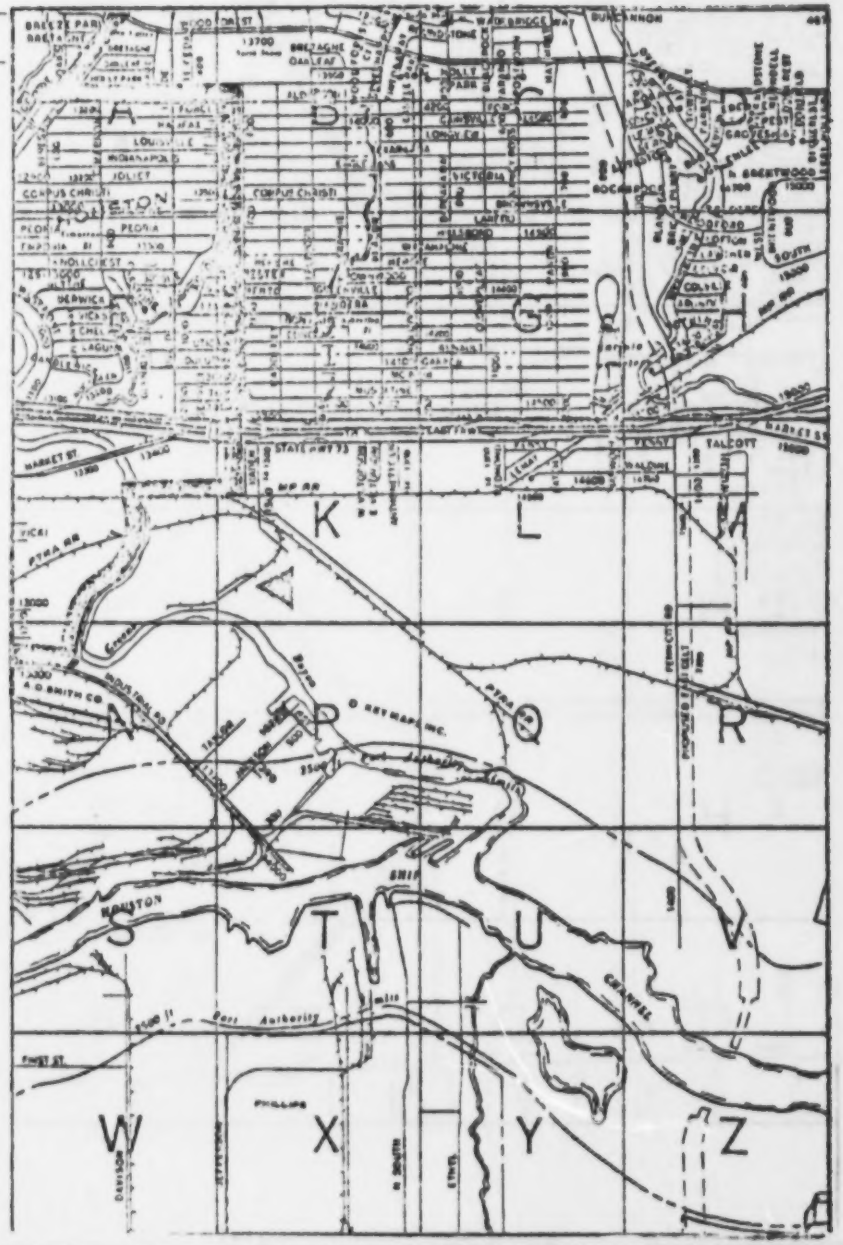
REICHHOLD CHEMICALS, INC. MAP



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Date March 10, 1976

Operator Mr. Ricks

Surveyors Bill Stulken
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name ROC Manufacturing Phone: 468-7743

Facility Address 1605 Brittmore Road, Houston

Permit Type TWQB Permit # 20601

Type(s) of Waste Ill. Carbon Quantity 15-60 yds^3/month

Site Area 25' x 50' Land Usage Rate/Yr.

Land Remaining 25' x 50'

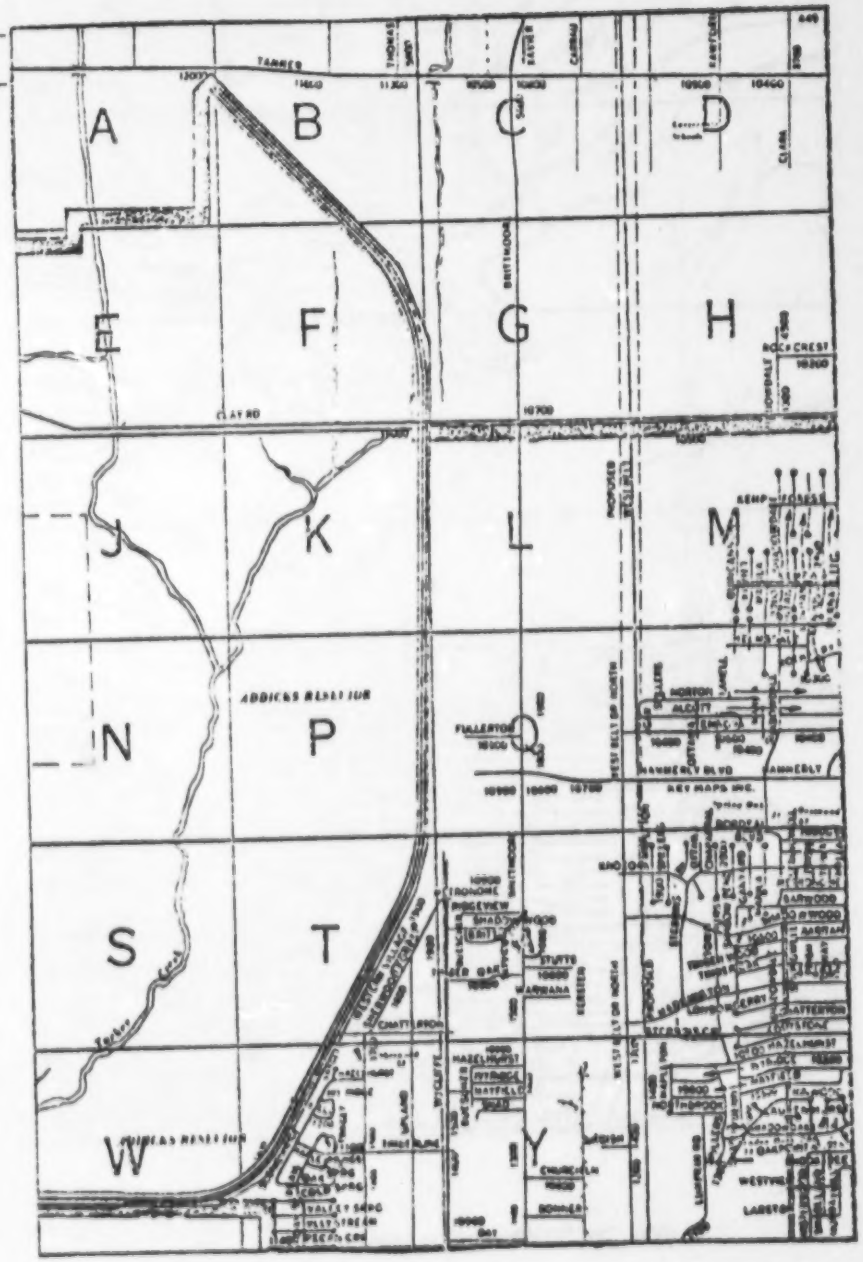
Life Expectancy 50 years

Relationship to Nearby Watercources Roadside drainage ditches approximately 50 yards distance, Turkey Creek 1 mile due west.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities. Lagoon 1' to 2' deep from which water evaporation rate equals or exceeds plant input.

Comments (Site Adequacy Evaluation) Site appeared adequate for the type and amount of material being handled.

ROC MANUFACTURING MAP



Date March 2, 1976

Operator Mr. Gottschalk

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Rohm & Haas Company Phone: 479-2861

Facility Address 1800 Old Battleground Road - H.S.C. on north, 225 on south, Tucker's Bayou on east, Diamond Shamrock on west.

Permit Type TWQB Permit # 20212

Type(s) of Waste	Quantity
Various filter cakes	1,830 tons/month
waste treatment plant	1,200 tons/month
oil additive	195 tons/month
methacrylate monomer	375 tons/month
Triton	60 tons/month

Site Area East landfill - 40 acres
Northeast landfill - 10 acres Land Usage Rate/Yr. N/A

Land Remaining

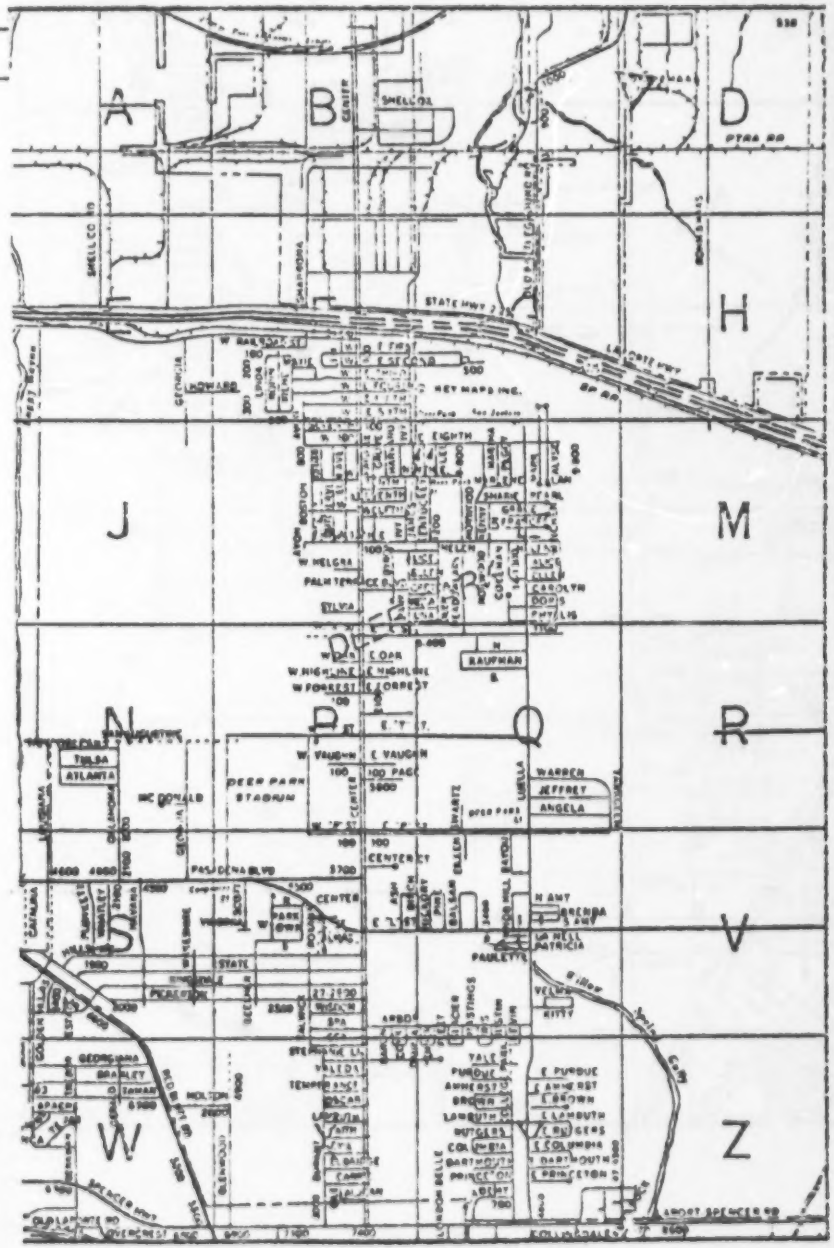
Life Expectancy 1 year

Relationship to Nearby Watercourses Patrick's Bayou on the west, Tucker's Bayou on the east, and the H.S.C. on the north.

Leachate Handling Techniques
(Description & Evaluation) Leachate and runoff are pumped to a chemical sewer and the wastewater treatment plant prior to discharge.

Comments
(Site Adequacy Evaluation) Sites were well run and appeared adequate.

ROHM & HAAS COMPANY MAP



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Date March 11, 1976

Operator Paul Carey

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Service Transport Company

Facility Address 7900 Almeda-Genoa Phone: 644-8207

Permit Type TWQB Permit # 20479

Type(s) of Waste I. Truck wash water Quantity 90-120 gals/month

Site Area 200' x 40' lagoon Land Usage Rate/Yr. N/A

Land Remaining 200' x 40'

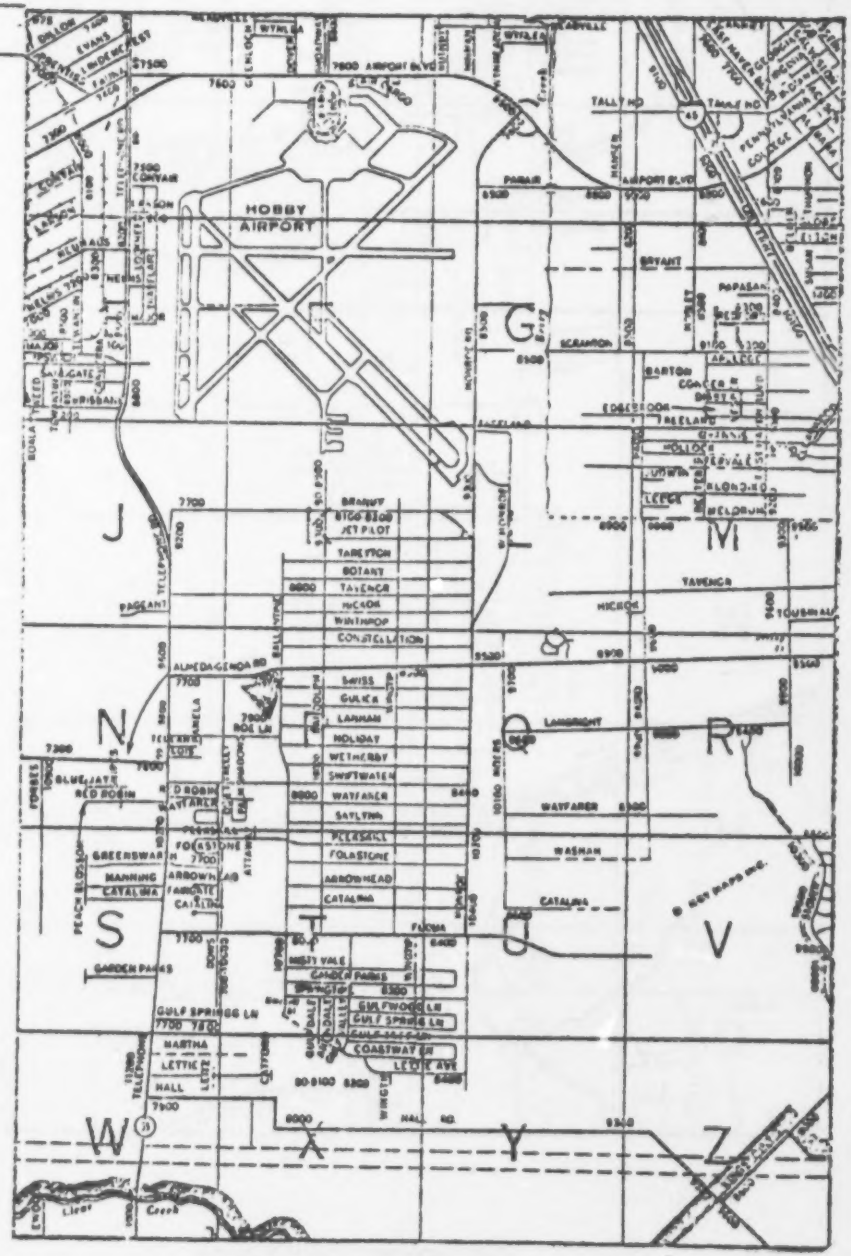
Life Expectancy Indefinite

Relationship to Nearby Watercourses Clear Creek 2 miles south, drainage ditch immediately adjacent to site.

Leachate Handling Techniques
(Description & Evaluation) No leachate facilities. Normal lagoon construction with runoff contained. Spray evaporation technique used, also some emulsifier treatment.

Comments
(Site Adequacy Evaluation) Site appeared adequate.

SERVICE TRANSPORT COMPANY MAP



Date March 5, 1976

Operator Mr. Frutiger

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Shell Chemical Company

Facility Address Shell Center, Deer Park - 1 mile south of H.S.C.

Permit Type TWQB Permit # 20687

Type(s) of Waste Primary solids and secondary sludge — Quantity 1140 tons/month (60% solids)

Spent solid catalyst — 1 ton/month (50-90% solids)

Site Area 25 acres Land Usage Rate/Yr. 5 to 10 acres/year

Land Remaining 1-2 acres

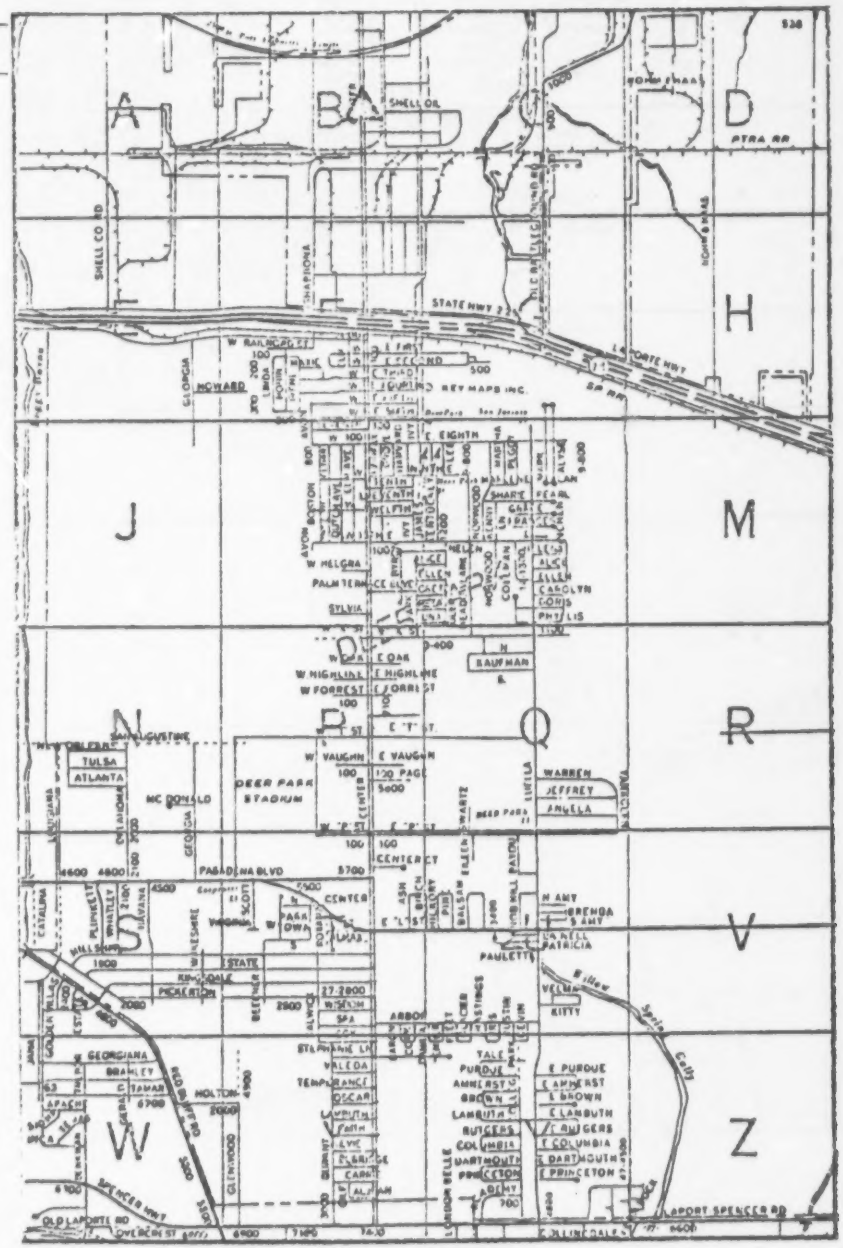
Life Expectancy 3 to 4 months

Relationship to Nearby Watercourses H.S.C. to the north, Boggy Bayou due west, Patrick Bayou due east.

Leachate Handling Techniques (Description & Evaluation) Clay lined disposal areas - no leachate generation.

Comments (Site Adequacy Evaluation) A new 50 acre site will begin operation in 1976. This new site will serve both the Shell Chemical Plant and the Shell Oil Refinery. The new site should last 5 to 10 years.

SHELL CHEMICAL COMPANY MAP



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Date March 5, 1976

Operator Mr. Frutiger

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Shell Oil Company

Facility Address Shell Center, Deer Park - 1 mile south of H.S.C.

Permit Type None Permit #

Type(s) of Waste	Quantity
Organic lead-bearing solids	3 tons/month
Biological sludge	1100 tons/month
Oily sludge	62.5 tons/month
Primary solids	1000 tons/month
Spent solid catalyst	20 tons/month

Site Area 16 acres Land Usage Rate/Yr. 0.6 to 1.2 acres/year

Land Remaining 6 acres

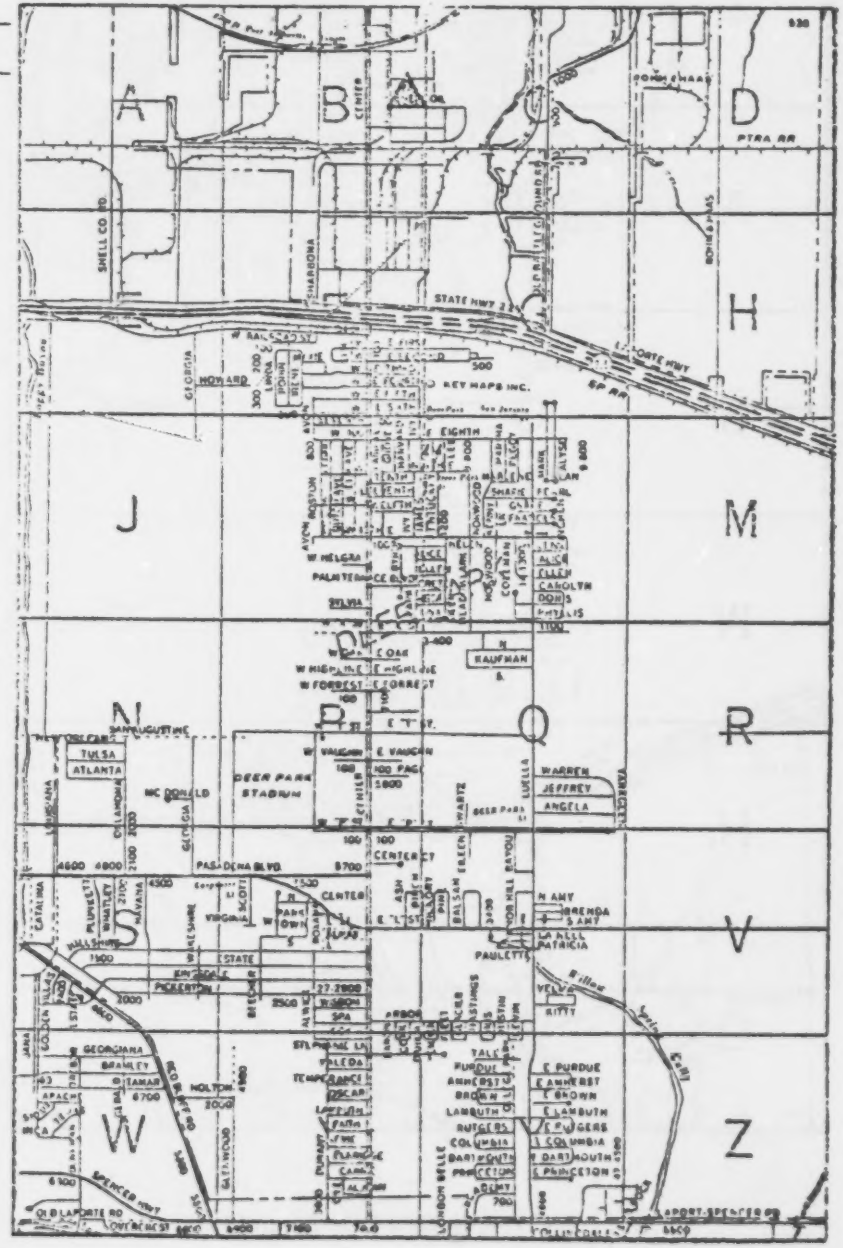
Life Expectancy 5 to 10 years

Relationship to Nearby Watercources H.S.C. lies due north, Boggy Bayou due west, and Patrick Bayou due east.

Leachate Handling Techniques
(Description & Evaluation) Stormwater collection and treatment system - no leachate problems due to clay lining in disposal areas.

Comments
(Site Adequacy Evaluation) A new 50 acre site will begin operation in 1976. This new site will serve both the Shell Oil Refinery and the Shell Chemical Plant. The new site should last 5 to 10 years.

SHELL OIL COMPANY MAP



Date April 5, 1976

Operator John Adams

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Southland Paper Mills.

Facility Address 1700 Garrett Road, Harris County - End of Sheldon Road, Phone: 456-9830

Permit Type TWQB Permit # 01160

Type(s) of Waste II. Wood pulping rejects Quantity 30 tons/month

sludge & sawdust ashes N/A

Site Area 6 acres Land Usage Rate/Yr. 0.6 acres/year

Land Remaining 6 acres

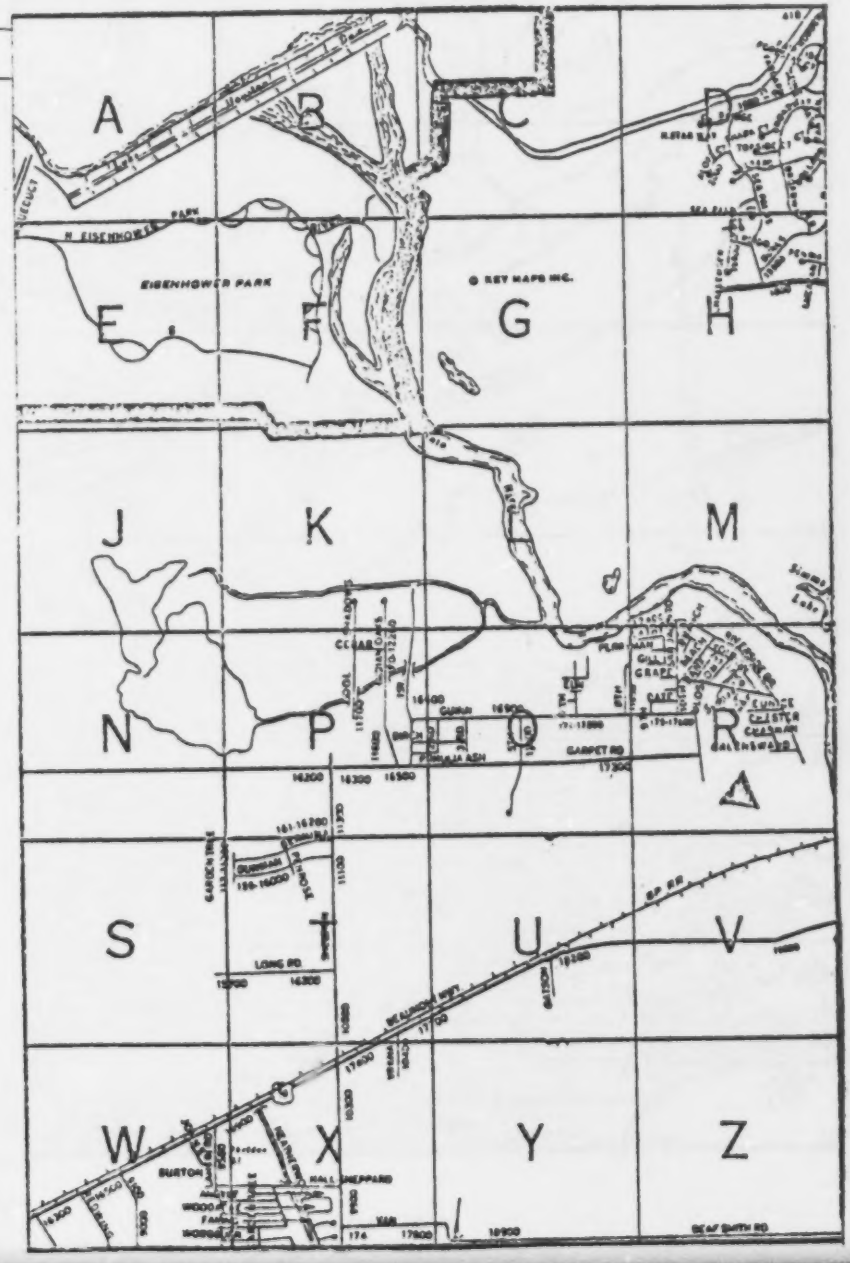
Life Expectancy 10 years

Relationship to Nearby Watercources San Jacinto River due east approximately 1/3 mile.

Leachate Handling Techniques (Description & Evaluation) Leachate collection ditch channeled leachate and stormwater runoff back through the plant treatment facilities prior to discharge.

Comments (Site Adequacy Evaluation) System appeared adequate for waste being deposited.

SOUTHLAND PAPER MILLS, INC. MAP



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Date April 5 1976

Operator G. W. Fry

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Stauffer Chemical

Facility Address 1632 Haden Road, Houston

Permit Type TWQB Permit # 00541

Type(s) of Waste	Quantity
Gypsum Anhydrite	5,000 tons/month
Calcium Fluoride	100 tons/month
Calcium Sulfate - Mud	70 tons/month
Calcium Sulfate - Slurry	20,000 gals/month

Site Area 38 acres Land Usage Rate/Yr. 1 acre/year

Land Remaining 21.5 acres

Life Expectancy 20 years

Relationship to Nearby Watercources Green's Bayou immediately adjacent, with the Houston Ship Channel 1/2 mile south.

Leachate Handling Techniques (Description & Evaluation) Two-phase neutralization system to handle leachate.

Comments (Site Adequacy Evaluation) Site appeared adequate for the amount and type of material being handled.

STAUFFER CHEMICAL MAP
HADEN ROAD

Date March 3, 1976

Operator C.A. Barnett, Mr. Sanders

Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Stauffer Chemical

Facility Address 1000 Jefferson, Houston - next to Olin Chemical

Permit Type TWQB Permit # 20259

Type(s) of Waste Calcium sulfate (waste gypsum) Quantity 25,000 tons/month average

Site Area 32 acres Land Usage Rate/Yr. 2 acres/year

Land Remaining 32 acres

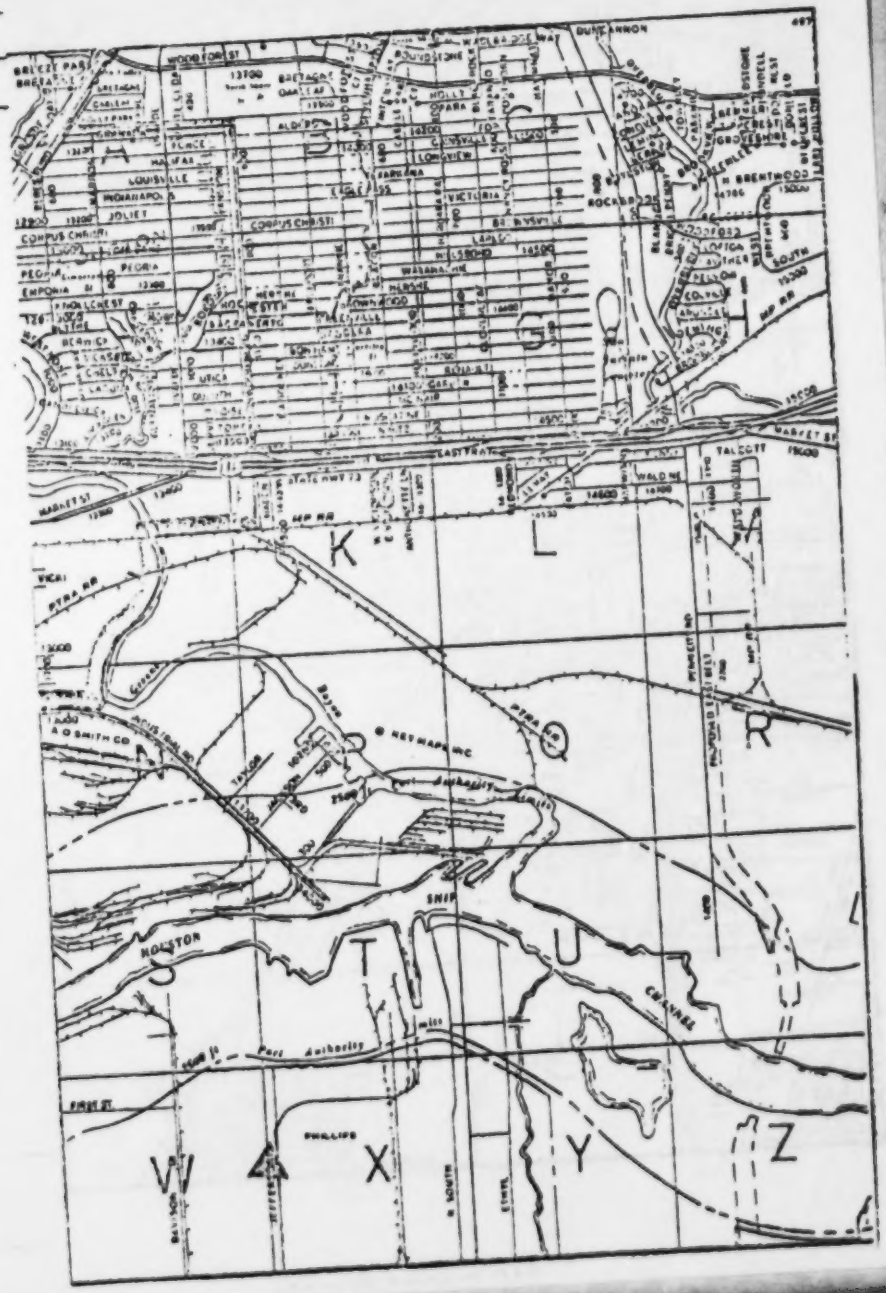
Life Expectancy 12 to 15 years

Relationship to Nearby Watercources 3/4 mile south of H.S.C.

Leachate Handling Techniques (Description & Evaluation) Collection ditches along side pysum piles channel water to industrial wastewater treatment facility.

Comments (Site Adequacy Evaluation) This facility appears to be adequate for the amount of waste being generated.

STAUFFER CHEMICAL MAP
JEFFERSON



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Date March 10, 1976

Operator Beau Kennon

Surveyors Bill Stullken
Mike Johnson

SOLID WASTE DISPOSAL SITE

TREES OF HOUSTON MAP

Inventory

Facility Name Trees of Houston Phone: 692-6371

Facility Address Turney Drive - off Hwy. 149 and I.H. 45

Permit Type TWQB Permit # 20419

Type(s) of Waste Trees and brush, wood chips, logs Quantity 21,000 yds^3/month

Site Area 10 acres Land Usage Rate/Yr. 2.5 - 3.0 acres/year

Land Remaining 10 acres

Life Expectancy 3 to 4 years

Relationship to Nearby Watercourses Hall's Bayou is adjacent to the site to the south.

Leachate Handling Techniques (Description & Evaluation) No leachate facilities nor holding pond for runoff catchment was observed

Comments (Site Adequacy Evaluation) Site appeared adequate for the amount and type of waste being deposited.

Date April 5, 1976

Operator R. E. Duncan, Jr.

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name The Upjohn Company, Polymer Chemicals Division

Facility Address Battleground Road, Deer Park Phone: 479-1541

Permit Type TWQB Permit # 00663

Type(s) of Waste 1. Filter cake, diatomaceous earth with 5% polyglycols Quantity 1.8 tons/month

Site Area 30 to 40 acres Land Usage Rate/Yr. N/A

Land Remaining 30 to 40 acres

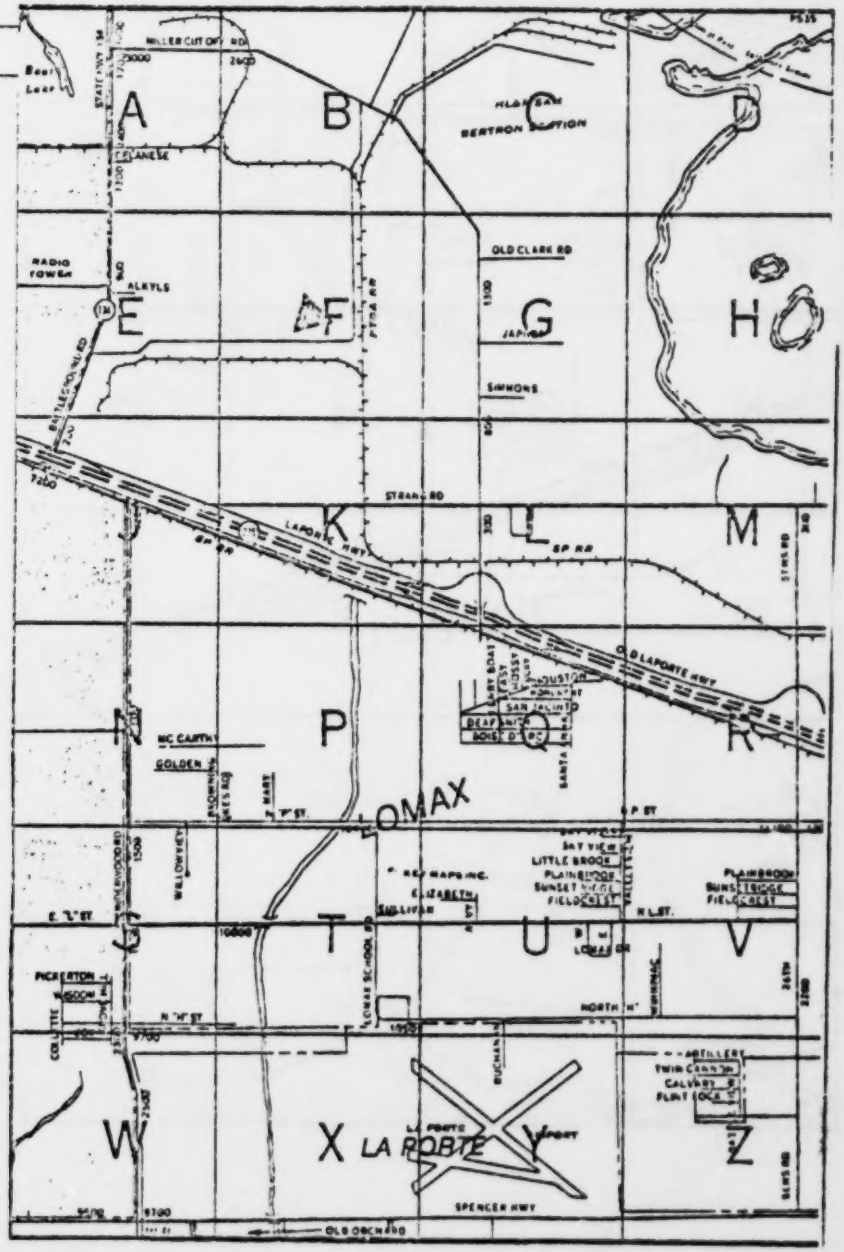
Life Expectancy Indefinite

Relationship to Nearby Watercourses Big Island Slough 1/2 mile south, San Jacinto Bay about 1 mile east.

Leachate Handling Techniques
(Description & Evaluation) No leachate facilities were in evidence. Stormwater runoff entered a holding pond of approximately 20' x 40' in area.

Comments
(Site Adequacy Evaluation) A very small operation. The wastes were well contained within the confines of the site. Site adequate.

THE UPJOHN COMPANY MAP
POLYMER CHEMICALS DIVISION



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Date February 25, 1976

Operator Brian Roddy

Surveyors Tom Samson
Mike Johnson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name U. S. Industrial Chemicals Company Phone: 479-2873

Facility Address On Miller Cutoff Road, La Porte - 1 mile north of 225

Permit Type TWQB Permit # 20523

Type(s) of Waste I. Waste oil Quantity 45,000 gals/month
Burned in steam boiler

II. Vinyl acetate monomer 19,000 gals/month - incinerated

Site Area 1 acre Land Usage Rate/Yr. N/A

Land Remaining 1/2 acre

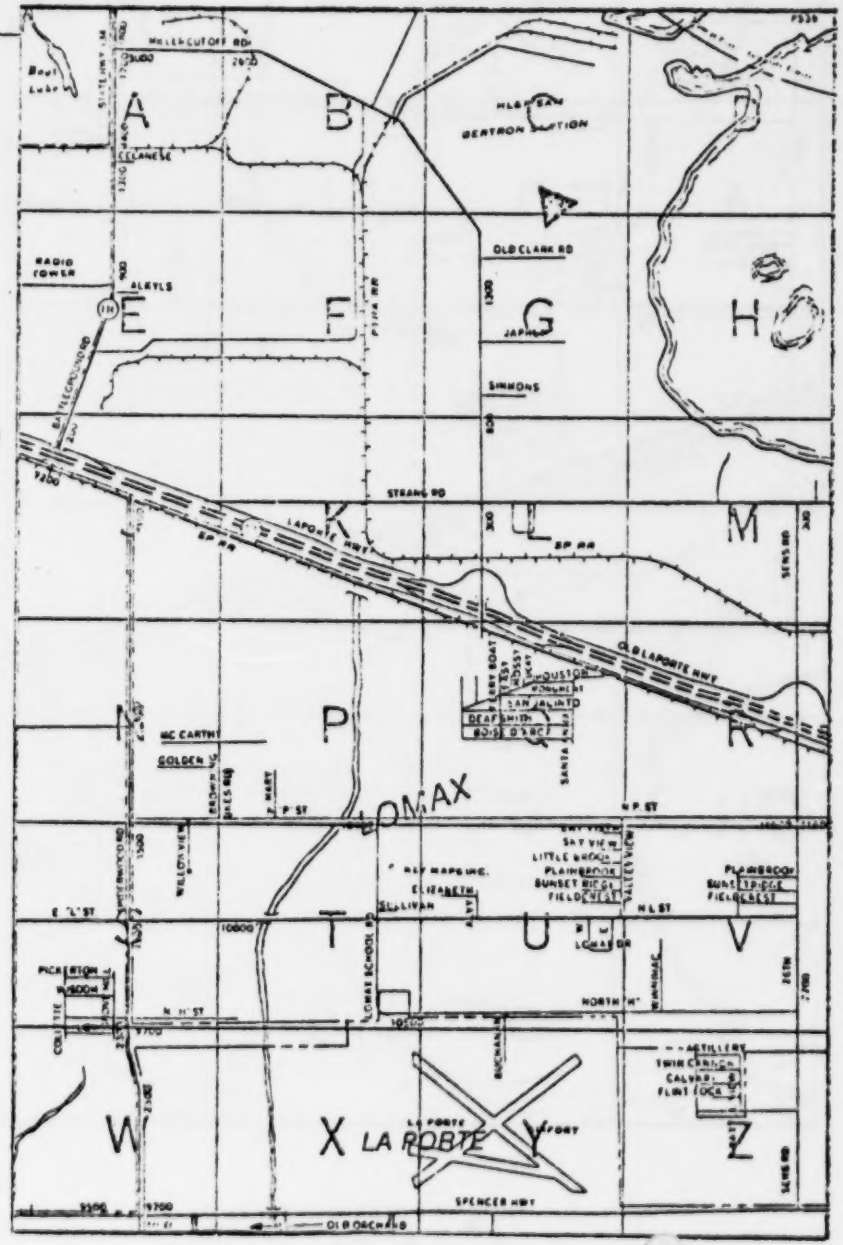
Life Expectancy 1973 shut down - inactive

Relationship to Nearby Watercources San Jacinto Bay due east, drains into San Jacinto River and Galveston Bay.

Leachate Handling Techniques
(Description & Evaluation) None. Ditch surrounds site and runoff flows downstream to H.S.C.

Comments
(Site Adequacy Evaluation) Inactive. Doesn't appear to present any problems.

U. S. INDUSTRIAL CHEMICALS COMPANY MAP



Date March 3, 1976
S. Hayes
Operator J. Goodman
Surveyors Tom Samson

SOLID WASTE DISPOSAL SITE

Inventory

Facility Name Western Commercial Transport Phone: 458-1851

Facility Address 13600 Old Hwy. 90, Houston - NE corner of 90 and East Belt

Permit Type TWQB Permit # 20629

Type(s) of Waste 1. Truck washwater* Quantity 11,000 gals/month

Site Area 1/2 to 3/4 acre Land Usage Rate/Yr. N/A

Land Remaining 1/2 to 3/4 acre

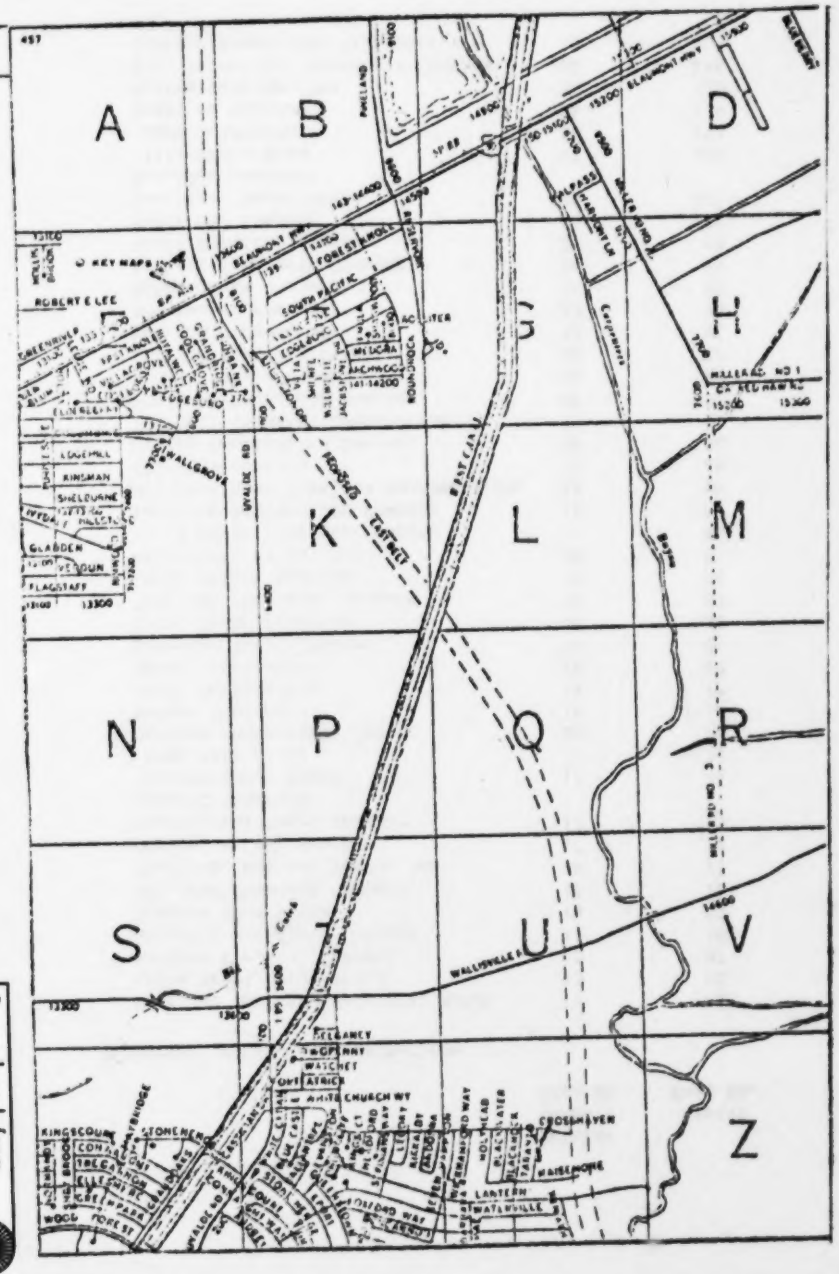
Life Expectancy Indefinite

Relationship to Nearby Watercourses Sheldon Reservoir 1 mile northeast, Carpenter's Bayou 1½ miles northeast

Leachate Handling Techniques (Description & Evaluation) N/A

Comments (Site Adequacy Evaluation) *2,750 gals/month of sludge is generated from the washwater but is hauled off. On-site disposal amounts to evaporation. Site is adequate for the type and quantity of waste being handled.

WESTERN COMMERCIAL TRANSPORT MAP



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PART VI - INDEX OF SOLID WASTE OPERATIONS

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MAP KEY
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INDUSTRIAL SOLID WASTE OPERATIONS

△01 American Smelting/Federated Metal
△02 Armco Steel Corporation
△03 Ashland Chemical Company
△04 Atlantic Richfield Company
△05 Cameron Iron Works
△06 Celanese Chemical Company
△07 Challenge Machine Works, Inc.
△08 Chance, A. B., Company
△09 Continental-Emsco Company
Diamond Shamrock
△10 Greens Bayou Plant
△11 Deer Park Plant
△12 Dresser Industries, Inc.
△13 Du Pont Company
△14 Ethyl Corporation
△15 Exxon Corporation
△16 Goodyear Tire & Rubber
△17 Green Thumb Products
△18 Gulf Oil Chemicals Company
△19 Ideal Cement Company
△20 Job-Master Sales, Inc.
△21 Kirby Steel Products Company
△22 Landreth Engineering Company
△23 Mid-Continent Pipeline Equip. Co.
△24 Olin Corporation
△25 Olshan Demolishing Company
△26 Pearsall Chemical Corporation

MUNICIPAL SOLID WASTE OPERATIONS

(01) Baytown, City of
(02) Bellaire, City of
(03) Galena Park, City of
(04) Harris County Site #3
(05) Jacinto City, City of
(06) Katy, City of
(07) Pasadena, City of
(08) Prairie View A&M College
(09) West University Place, City of

COMMERCIAL SOLID WASTE OPERATIONS

[01] Addicks-Fairbanks Road Sand Company
American Refuse Systems
[02] 23 Acre Site
[03] 75 Acre Site
[04] Browning-Ferris Industries
[05] Browning-Ferris Ind. - Chemfix Operation
[06] Carter-Swint Dumping & Demolition Co.
[07] Casco Hauling & Excavating Company
[08] Doty Sand Pit, Inc.
[09] Gulf Metals Industries
[10] Harris Landfill
[11] Hazelwood, Gene B.
[12] John M. Kilgore/J. D. Giddings Co.
[13] Lewco Company

MAP KEY
Solid Waste Disposal Sites
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INDUSTRIAL SOLID WASTE OPERATIONS

27 Phillips Petroleum Company
28 Proler International
29 Quality Electric Steel
30 Reichhold Chemicals
31 ROC Manufacturing
32 Rohm & Haas Company
33 Service Transport Company
34 Shell Chemical Company
35 Shell Oil Company
36 Southland Paper Mills
Stauffer Chemical
37 1632 Haden Road
38 1000 Jefferson
39 Trees of Houston
40 Upjohn Company, The
41 U. S. Industrial Chemicals Company
42 Western Commercial Transport

COMMERCIAL SOLID WASTE OPERATIONS

14 Liberty Waste Disposal Company
15 Livingston Construction Co., Inc.
16 McDonald, James G.
17 Rollins Environmental
18 Southwestern Barge Fleet Service
19 Tex-Haul, Inc.
20 Walker's Sand Pit
21 Waste Products, Inc.
22 G. O. Weiss, Inc.
23 Western Land Reclamation